

Title (en)
HERMETICALLY SEALED PACKAGE HAVING STRESS REDUCING LAYER

Title (de)
HERMETISCH VERSCHLOSSENE VERPACKUNG MIT SPANNUNGSENTLASTUNGSSCHICHT

Title (fr)
BOÎTIER HERMÉTIQUEMENT CLOS À COUCHE DE RÉDUCTION DES CONTRAINTES

Publication
EP 3180288 A1 20170621 (EN)

Application
EP 14755503 A 20140811

Priority
US 2014050589 W 20140811

Abstract (en)
[origin: WO2016024946A1] A sealed package having a device 102 disposed on a wafer structure and a lid structure 108 bonded to the device wafer. The device wafer includes: a substrate 104; a metal ring 107DW disposed on a surface portion of substrate around the device and a bonding material 118 disposed on the metal ring. A first layer of the metal ring includes a stress relief buffer layer 109DW having a higher ductility than that of the surface portion of the substrate and a width greater than the width of the bonding material. The metal ring extends laterally beyond at least one of the inner and outer edges of the bonding material. The stress relief buffer layer has a coefficient of thermal expansion greater than the coefficient of expansion of the surface portion of the substrate and less than the coefficient of expansion of the bonding material.

IPC 8 full level
B81C 1/00 (2006.01); **H01L 23/00** (2006.01); **H01L 23/10** (2006.01)

CPC (source: EP IL KR)
B81B 7/0051 (2013.01 - EP IL KR); **H01L 23/10** (2013.01 - EP IL KR); **H01L 23/562** (2013.01 - EP IL KR); **B81B 2201/0207** (2013.01 - EP IL KR); **B81C 2203/0109** (2013.01 - EP IL KR); **B81C 2203/035** (2013.01 - EP IL KR); **H01L 2924/00** (2013.01 - IL); **H01L 2924/0002** (2013.01 - EP IL KR)

C-Set (source: EP)
H01L 2924/0002 + H01L 2924/00

Citation (examination)
JP 2013084689 A 20130509 - OMRON TATEISI ELECTRONICS CO

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 2016024946 A1 20160218; CA 2946526 A1 20160218; CA 2946526 C 20210323; CN 106414309 A 20170215; CN 106414309 B 20200228; EP 3180288 A1 20170621; IL 248686 A0 20170131; IL 248686 B 20200930; IL 276281 A 20200930; IL 276281 B 20210531; JP 2017527113 A 20170914; JP 6487032 B2 20190320; KR 101931010 B1 20181219; KR 20160146879 A 20161221

DOCDB simple family (application)
US 2014050589 W 20140811; CA 2946526 A 20140811; CN 201480079309 A 20140811; EP 14755503 A 20140811; IL 24868616 A 20161101; IL 27628120 A 20200726; JP 2017507405 A 20140811; KR 20167032332 A 20140811