

Title (en)
METHOD AND DEVICE FOR THE TEMPERATURE-CRITICAL JOINING OF TWO COMPONENT LAYERS

Title (de)
VERFAHREN UND VORRICHTUNG ZUM TEMPERATURKRITISCHEN FÜGEN ZWEIER BAUTEILSCHICHTEN

Title (fr)
PROCÉDÉ ET DISPOSITIF D'ASSEMBLAGE À TEMPÉRATURE CRITIQUE DE DEUX COUCHES DE COMPOSANT

Publication
EP 4196314 A1 20230621 (DE)

Application
EP 21749631 A 20210727

Priority
• DE 102020210201 A 20200812
• EP 2021071035 W 20210727

Abstract (en)
[origin: WO2022033869A1] The invention presented relates to a method (100) for the temperature-critical joining of a first electrically conductive component layer (103, 301) having a first constant material thickness and a second component layer (105, 303) having a second constant material thickness, there being disposed on the second component layer (105, 303) at least one electronic component which has a critical temperature below a melting point of the first component layer (103, 301) and of the second component layer (105, 303). The method (100) comprises the following steps: - arranging the first component layer (103, 301) over the second component layer (105, 303) without a gap; - moving a laser beam (101) with constant power along the first component layer (103, 301) with a welding advancement which causes a material forming the first component layer (103, 301) to be partly melted down to the second component layer (105, 303) by means of energy input of the laser beam (101) and which causes only material in a surface region (111, 307) of the second component layer (105, 303) to be melted by means of the energy input.

IPC 8 full level
B23K 26/21 (2014.01); **B23K 26/32** (2014.01); **H01L 23/00** (2006.01); **H01R 43/02** (2006.01); **H05K 3/32** (2006.01); **B23K 101/40** (2006.01); **B23K 103/10** (2006.01); **B23K 103/12** (2006.01)

CPC (source: EP)
B23K 26/21 (2015.10); **B23K 26/32** (2013.01); **H05K 3/32** (2013.01); **H05K 3/328** (2013.01); **B23K 2101/40** (2018.07); **B23K 2103/10** (2018.07); **B23K 2103/12** (2018.07); **H01R 43/0221** (2013.01); **H05K 2203/107** (2013.01)

Citation (search report)
See references of WO 2022033869A1

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2022033869 A1 20220217; CN 116157226 A 20230523; DE 102020210201 A1 20220217; EP 4196314 A1 20230621

DOCDB simple family (application)
EP 2021071035 W 20210727; CN 202180056378 A 20210727; DE 102020210201 A 20200812; EP 21749631 A 20210727