

Title (en)

FLIP-CHIP ASSEMBLY PROCESS COMPRISING PRE-COATING INTERCONNECT ELEMENTS

Title (de)

FLIP-CHIP-MONTAGEVERFAHREN MIT VORBESCHICHTETEN VERBINDUNGSELEMENTEN

Title (fr)

PROCEDE D'ASSEMBLAGE FLIP CHIP COMPORTANT LE PRE-ENROBAGE D'ELEMENTS D'INTERCONNEXION

Publication

EP 2976784 A1 20160127 (FR)

Application

EP 14718658 A 20140321

Priority

- FR 1352557 A 20130322
- FR 2014050665 W 20140321

Abstract (en)

[origin: WO2014147355A1] This process for assembling first and second electronic components (50, 52) comprises: producing connecting elements on an assembly face of the first component (50) and producing connecting elements on an assembly face of the second component (52); depositing a liquid layer (70) of curable and electrically insulating material on the assembly face of the first and/or second component; arranging the first and second components (50, 52) one on the other so as to place the connecting elements of the second component facing the connecting elements of the first component; applying a force, in a preset direction (A), to the first and/or second components (50, 52) so as to create electrical interconnects each of which consists of one connecting element (56) of the first component (50) and one connecting element (58) of the second component (52); and curing the curable material (70). The connecting elements (56) of the first component (50) are hollow inserts having an open end and the connecting elements (58) of the second component (52) are solid elements (58) of lower hardness than that of the inserts (56), applying the force leads to the inserts (56) being inserted into the solid elements (58). The geometry of the inserts (56) and the geometry of the solid elements (58), and/or the relative position of the latter during the insertion, are chosen so as to leave a portion of the open end of the inserts (56) free during the insertion. The curable material (70) does not comprise deoxidising flux.

IPC 8 full level

H01L 23/00 (2006.01); **H01L 21/56** (2006.01); **H01L 31/02** (2006.01)

CPC (source: EP US)

H01L 24/13 (2013.01 - EP US); **H01L 24/16** (2013.01 - EP US); **H01L 24/27** (2013.01 - EP US); **H01L 24/29** (2013.01 - EP US); **H01L 24/81** (2013.01 - EP US); **H01L 24/83** (2013.01 - EP US); **H01L 24/92** (2013.01 - EP US); **H01L 25/50** (2013.01 - US); **H01L 27/1465** (2013.01 - EP US); **H01L 21/561** (2013.01 - EP US); **H01L 24/32** (2013.01 - EP US); **H01L 2224/13011** (2013.01 - EP US); **H01L 2224/13015** (2013.01 - EP US); **H01L 2224/13109** (2013.01 - EP US); **H01L 2224/13111** (2013.01 - EP US); **H01L 2224/13116** (2013.01 - EP US); **H01L 2224/13118** (2013.01 - EP US); **H01L 2224/13124** (2013.01 - EP US); **H01L 2224/13139** (2013.01 - EP US); **H01L 2224/13147** (2013.01 - EP US); **H01L 2224/13155** (2013.01 - EP US); **H01L 2224/13166** (2013.01 - EP US); **H01L 2224/13169** (2013.01 - EP US); **H01L 2224/1318** (2013.01 - EP US); **H01L 2224/13184** (2013.01 - EP US); **H01L 2224/13186** (2013.01 - EP US); **H01L 2224/13562** (2013.01 - EP US); **H01L 2224/1357** (2013.01 - EP US); **H01L 2224/13609** (2013.01 - EP US); **H01L 2224/13611** (2013.01 - EP US); **H01L 2224/13616** (2013.01 - EP US); **H01L 2224/13618** (2013.01 - EP US); **H01L 2224/13624** (2013.01 - EP US); **H01L 2224/13639** (2013.01 - EP US); **H01L 2224/13644** (2013.01 - EP US); **H01L 2224/13647** (2013.01 - EP US); **H01L 2224/13669** (2013.01 - EP US); **H01L 2224/16052** (2013.01 - EP US); **H01L 2224/16148** (2013.01 - EP US); **H01L 2224/16238** (2013.01 - EP US); **H01L 2224/2741** (2013.01 - EP US); **H01L 2224/27618** (2013.01 - EP US); **H01L 2224/2919** (2013.01 - EP US); **H01L 2224/73104** (2013.01 - EP US); **H01L 2224/73204** (2013.01 - EP US); **H01L 2224/81099** (2013.01 - EP US); **H01L 2224/81193** (2013.01 - EP US); **H01L 2224/81194** (2013.01 - EP US); **H01L 2224/81355** (2013.01 - EP US); **H01L 2224/83191** (2013.01 - EP US); **H01L 2224/83859** (2013.01 - EP US); **H01L 2224/83862** (2013.01 - EP US); **H01L 2224/83868** (2013.01 - EP US); **H01L 2224/83871** (2013.01 - EP US); **H01L 2224/83874** (2013.01 - EP US); **H01L 2224/83986** (2013.01 - EP US); **H01L 2224/9211** (2013.01 - EP US); **H01L 2224/92125** (2013.01 - EP US); **H01L 2224/94** (2013.01 - EP US); **H01L 2224/97** (2013.01 - EP US)

C-Set (source: EP US)

1. **H01L 2224/94 + H01L 2224/81**
2. **H01L 2224/13669 + H01L 2924/00014**
3. **H01L 2224/83862 + H01L 2924/00014**
4. **H01L 2224/9211 + H01L 2224/81 + H01L 2224/83**
5. **H01L 2224/1318 + H01L 2924/00014**
6. **H01L 2224/13166 + H01L 2924/01074**
7. **H01L 2224/13124 + H01L 2924/00014**
8. **H01L 2224/13111 + H01L 2924/00014**
9. **H01L 2224/13109 + H01L 2924/00014**
10. **H01L 2224/13116 + H01L 2924/00014**
11. **H01L 2224/13139 + H01L 2924/00014**
12. **H01L 2224/2919 + H01L 2924/0665**
13. **H01L 2224/13118 + H01L 2924/00014**
14. **H01L 2224/13624 + H01L 2924/00014**
15. **H01L 2224/13611 + H01L 2924/00014**
16. **H01L 2224/13609 + H01L 2924/00014**
17. **H01L 2224/13616 + H01L 2924/00014**
18. **H01L 2224/13639 + H01L 2924/00014**
19. **H01L 2224/13647 + H01L 2924/00014**
20. **H01L 2224/13618 + H01L 2924/00014**
21. **H01L 2224/97 + H01L 2224/81**
22. **H01L 2224/94 + H01L 2224/27**
23. **H01L 2224/13184 + H01L 2924/00014**
24. **H01L 2224/2741 + H01L 2924/00014**
25. **H01L 2224/83986 + H01L 2224/274 + H01L 2224/83 + H01L 2224/276**
26. **H01L 2224/83871 + H01L 2924/00014**

27. H01L 2224/83868 + H01L 2924/00014
28. H01L 2224/83874 + H01L 2924/00014
29. H01L 2224/13184 + H01L 2924/01014 + H01L 2924/00014
30. H01L 2224/13186 + H01L 2924/04941
31. H01L 2224/13169 + H01L 2924/00014
32. H01L 2224/13147 + H01L 2924/00014
33. H01L 2224/13155 + H01L 2924/00014
34. H01L 2224/13644 + H01L 2924/00014

Citation (search report)

See references of WO 2014147355A1

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 2014147355 A1 20140925; EP 2976784 A1 20160127; FR 3003688 A1 20140926; FR 3003688 B1 20160701; JP 2016512929 A 20160509; JP 6501752 B2 20190417; KR 102305916 B1 20210927; KR 20150135211 A 20151202; US 2015380395 A1 20151231; US 9406662 B2 20160802

DOCDB simple family (application)

FR 2014050665 W 20140321; EP 14718658 A 20140321; FR 1352557 A 20130322; JP 2016503710 A 20140321; KR 20157020381 A 20140321; US 201414763095 A 20140321