

Title (en)
HIGH POWER MULTILAYER MODULE HAVING LOW INDUCTANCE AND FAST SWITCHING FOR PARALLELING POWER DEVICES

Title (de)
MEHRSCICHTIGES HOCHLEISTUNGSMODUL MIT NIEDRIGER INDUKTIVITÄT UND SCHNELLER UMSCHALTUNG FÜR PARALLELE LEISTUNGSVORRICHTUNGEN

Title (fr)
MODULE MULTICOUCHE HAUTE PUISSANCE AYANT UNE FAIBLE INDUCTANCE ET UNE COMMUTATION RAPIDE POUR METTRE EN PARALLÈLE DES DISPOSITIFS DE PUISSANCE

Publication
EP 3909124 A1 20211117 (EN)

Application
EP 20738754 A 20200103

Priority

- US 201962790965 P 20190110
- US 201916266771 A 20190204
- US 201962914847 P 20191014
- US 201916658630 A 20191021
- US 2020012167 W 20200103

Abstract (en)
[origin: WO2020146204A1] A power module including at least one substrate, a housing arranged on the at least one power substrate, a first terminal electrically connected to the at least one power substrate, a second terminal including a contact surface, a third terminal electrically connected to the at least one power substrate, a plurality of power devices arranged on and connected to the at least one power substrate, and the third terminal being electrically connected to at least one of the plurality of power devices. The power module further including a base plate and a plurality of pin fins arranged on the base plate and the plurality of pin fins configured to provide direct cooling for the power module.

IPC 8 full level
H02M 7/00 (2006.01); **H05K 5/00** (2006.01); **H05K 5/02** (2006.01); **H05K 7/14** (2006.01)

CPC (source: CN EP KR)
G01R 22/061 (2013.01 - KR); **H01L 23/585** (2013.01 - EP KR); **H01L 25/072** (2013.01 - CN EP KR); **H01L 25/16** (2013.01 - EP KR); **H01L 25/18** (2013.01 - EP KR); **H02M 1/0054** (2021.05 - EP KR); **H02M 1/32** (2013.01 - EP KR); **H02M 1/327** (2021.05 - EP KR); **H02M 1/44** (2013.01 - EP KR); **H02M 7/003** (2013.01 - CN EP KR); **H02M 7/5387** (2013.01 - CN); **H05K 7/14329** (2022.08 - KR); **H05K 7/209** (2013.01 - EP KR); **H01L 24/06** (2013.01 - EP); **H01L 24/29** (2013.01 - EP); **H01L 24/32** (2013.01 - EP); **H01L 24/45** (2013.01 - EP); **H01L 24/49** (2013.01 - EP); **H01L 24/73** (2013.01 - EP); **H01L 24/83** (2013.01 - EP); **H01L 24/85** (2013.01 - EP); **H01L 2224/0603** (2013.01 - EP); **H01L 2224/29101** (2013.01 - EP); **H01L 2224/2929** (2013.01 - EP); **H01L 2224/29339** (2013.01 - EP); **H01L 2224/45124** (2013.01 - EP); **H01L 2224/45144** (2013.01 - EP); **H01L 2224/45147** (2013.01 - EP); **H01L 2224/48091** (2013.01 - EP); **H01L 2224/48247** (2013.01 - EP); **H01L 2224/48472** (2013.01 - EP); **H01L 2224/49111** (2013.01 - EP); **H01L 2224/73265** (2013.01 - EP); **H01L 2224/83801** (2013.01 - EP); **H01L 2224/8384** (2013.01 - EP); **H01L 2224/8385** (2013.01 - EP); **H01L 2224/85205** (2013.01 - EP); **H01L 2224/85439** (2013.01 - EP); **H01L 2224/85444** (2013.01 - EP); **H01L 2224/85455** (2013.01 - EP); **H02M 1/0048** (2021.05 - EP); **H02M 1/088** (2013.01 - EP); **H02M 1/14** (2013.01 - EP); **H02M 3/00** (2013.01 - EP); **H02M 7/5387** (2013.01 - EP); **Y02B 70/10** (2013.01 - EP KR)

C-Set (source: EP)

1. **H01L 2224/45124 + H01L 2924/00014**
2. **H01L 2224/45147 + H01L 2924/00014**
3. **H01L 2224/45144 + H01L 2924/00014**
4. **H01L 2224/85205 + H01L 2924/00014**
5. **H01L 2224/85455 + H01L 2924/00014**
6. **H01L 2224/85439 + H01L 2924/00014**
7. **H01L 2224/85444 + H01L 2924/00014**
8. **H01L 2224/29339 + H01L 2924/00014**
9. **H01L 2224/2929 + H01L 2924/0655 + H01L 2924/00014**
10. **H01L 2224/29101 + H01L 2924/014 + H01L 2924/00014**
11. **H01L 2224/8384 + H01L 2924/00014**
12. **H01L 2224/8385 + H01L 2924/00014**
13. **H01L 2224/83801 + H01L 2924/00014**
14. **H01L 2224/48091 + H01L 2924/00014**

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 2020146204 A1 20200716; BR 112021013650 A2 20210914; BR 112021013650 A8 20210928; CN 113767563 A 20211207; CN 118573033 A 20240830; EP 3909124 A1 20211117; EP 3909124 A4 20221026; JP 2022508473 A 20220119; JP 2023029342 A 20230303; KR 102580635 B1 20230919; KR 20210136987 A 20211117; KR 20230125332 A 20230829

DOCDB simple family (application)
US 2020012167 W 20200103; BR 112021013650 A 20200103; CN 202080020186 A 20200103; CN 202410673324 A 20200103; EP 20738754 A 20200103; JP 2021540172 A 20200103; JP 2022192724 A 20221201; KR 20217025359 A 20200103; KR 20237027356 A 20200103