

Title (en)

ELECTRONIC POWER MODULE AND ELECTRICAL POWER CONVERTER INCORPORATING SAME

Title (de)

ELEKTRONISCHES LEISTUNGSMODUL UND ELEKTRISCHER LEISTUNGSWANDLER DAMIT

Title (fr)

MODULE ÉLECTRONIQUE DE PUISSANCE ET CONVERTISSEUR ÉLECTRIQUE DE PUISSANCE L'INCORPORANT

Publication

**EP 3610503 A1 20200219 (FR)**

Application

**EP 18723901 A 20180409**

Priority

- FR 1753254 A 20170413
- FR 2018050883 W 20180409

Abstract (en)

[origin: WO2018189468A1] The module (PM1) has an architecture with 3D stacking of the electronic power switching chips (IT, ID) and comprises first and second dielectric substrates (SH, SL) that are intended to come into thermal contact with first and second heat sinks (DH, DL), respectively, at least one pair of first and second stacked electronic power switching chips (ITHS, IDHS; ITHS, IDHS) and a common intermediate substrate (SC), the first and second electronic power switching chips being sandwiched between the first dielectric substrate and the common intermediate substrate and between the common intermediate substrate and the second dielectric substrate, respectively. According to the invention, the common intermediate substrate is a metal element formed as a single piece and comprises a central portion for the implantation of the electronic power switching chips and at least one thermal conduction portion that is in thermal contact with the first dielectric substrate and/or the second dielectric substrate.

IPC 8 full level

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CPC (source: EP US)

**F28D 15/04** (2013.01 - US); **H01L 23/367** (2013.01 - EP); **H01L 23/427** (2013.01 - US); **H01L 25/071** (2013.01 - EP US); **H01L 25/18** (2013.01 - EP); **H01L 2023/4068** (2013.01 - EP); **H01L 2224/33** (2013.01 - EP); **H01L 2224/48091** (2013.01 - EP); **H01L 2224/73253** (2013.01 - EP); **H01L 2924/181** (2013.01 - EP)

Citation (search report)

See references of WO 2018189468A1

Designated contracting state (EPC)

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**FR 2018050883 W 20180409**; CN 201880025047 A 20180409; EP 18723901 A 20180409; FR 1753254 A 20170413; US 201816604524 A 20180409