

Title (en)
PROCESSOR MODULE WITH INTEGRATED PACKAGED POWER CONVERTER

Title (de)
PROZESSORMODUL MIT INTEGRIERTEM VERPACKTEN LEISTUNGSWANDLER

Title (fr)
MODULE PROCESSEUR À CONVERTISSEUR DE PUISSANCE SOUS BOÎTIER INTÉGRÉ

Publication
EP 3841610 A4 20220406 (EN)

Application
EP 18932165 A 20180828

Priority
US 2018048290 W 20180828

Abstract (en)
[origin: WO2020046276A1] A power management module comprises one or more power converter chips that are mounted on a power management package substrate. First and second electrical contacts are disposed on opposing first and second sides of the power management package substrate. The power management module can be mounted on a processor module to supply power to one or more processor chips in the processor module. In one example, the processor chip(s) are mounted on a first side of a processor package substrate and the power management module is mounted on an opposing second side of the processor package substrate. The power management module and the processor module can be centered and aligned with respect to each other or they can be offset laterally from each other. In another embodiment, the power management module and the processor chip(s) are mounted on the same side of the processor package substrate.

IPC 8 full level
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Citation (search report)

- [X] US 2017236809 A1 20170817 - TRIMBERGER STEPHEN M [US], et al
- [X] US 2008116589 A1 20080522 - LI ZONG-FU [US], et al
- [X] US 2018190635 A1 20180705 - CHOI JU-YOUN [KR], et al
- See references of WO 2020046276A1

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US 2018048290 W 20180828; EP 18932165 A 20180828; TW 107141297 A 20181120