Title (en)

PUMPED LOOP DRIVEN VAPOR COMPRESSION COOLING SYSTEM

Title (de)

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Title (fr)

SYSTÈME DE REFROIDISSEMENT À COMPRESSION DE VAPEUR ENTRAÎNÉE PAR BOUCLE DE POMPAGE

Publication

EP 2435265 A1 20120404 (EN)

Application

EP 10721080 A 20100527

Priority

• US 2010036311 W 20100527
• US 18223709 P 20090529

Abstract (en)

[origin: WO2010138664A1] A cooling system is provided that combines a two-phase refrigerant pumped loop cooling circuit and a vapor compression loop circuit in a complete electronics cooling package for use in high ambient temperature applications. Specific applications may include, but are not limited to, power electronics converter and inverter drives, and hybrid electric vehicles. In hybrid electric vehicle applications, the primary pumped two-phase refrigerant cooling system is used for providing high-temperature cooling to the inverter drive. The secondary vapor compression system is used to provide low-temperature cooling to the battery module (i.e. such as Li-ion cells) or passenger compartment cooling, thereby eliminating the need for a special cooling solution for the battery module which requires lower temperature cooling.

IPC 8 full level

B60H 1/00 (2006.01); **F25B 29/00** (2006.01)

CPC (source: EP KR US)

B60H 1/00 (2013.01 - KR); **B60H 1/00278** (2013.01 - EP US); **B60H 1/004** (2013.01 - EP US); **B60H 1/32281** (2019.04 - EP US);
B60L 1/003 (2013.01 - EP US); **B60L 58/26** (2019.01 - EP US); **F25B 29/00** (2013.01 - KR); **H05K 7/20927** (2013.01 - EP US);
B60H 2001/00307 (2013.01 - EP US); B60H 2001/00928 (2013.01 - EP US); B60L 2240/34 (2013.01 - EP US); B60L 2240/525 (2013.01 - EP US);
B60L 2240/545 (2013.01 - EP US); F28D 15/00 (2013.01 - EP US); Y02T 10/70 (2013.01 - EP US)

Citation (search report)

See references of WO 2010138664A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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