

Title (en)

COOLING DEVICES FOR COOLING ELECTRIC COMPONENTS, MODULE CONSISTING OF A COOLING DEVICE AND ELECTRIC COMPONENTS AND ASSEMBLY COMPRISING A COOLING DEVICE OR MODULE AND A SUPPORT

Title (de)

KÜHLVORRICHTUNGEN ZUM KÜHLEN ELEKTRISCHER BAUTEILE, MODUL AUS KÜHLVORRICHTUNG UND ELEKTRISCHEN BAUTEILEN, UND ANORDNUNG AUS KÜHLVORRICHTUNG ODER MODUL UND TRÄGERKÖRPER

Title (fr)

DISPOSITIFS DE REFRROIDISSEMENT POUR REFRROIDIR DES COMPOSANTS ELECTRIQUES, MODULE CONSTITUE D'UN DISPOSITIF DE REFRROIDISSEMENT ET DE COMPOSANTS ELECTRIQUES, ENSEMBLE COMPOSE D'UN DISPOSITIF DE REFRROIDISSEMENT OU D'UN MODULE ET D'UN SUPPORT

Publication

EP 1506576 A1 20050216 (DE)

Application

EP 03729881 A 20030509

Priority

- DE 0301498 W 20030509
- DE 10222681 A 20020522

Abstract (en)

[origin: WO03098686A1] The invention relates to a cooling device (1) for cooling one or more power semiconductor components (20, 20'), comprising a flat, copper, plate-type hollow body (10) for conducting a coolant fluid (3). Components are fixed on one flat-sided surface (101) of the hollow body and the other flat-sided surface (102) comprises two coolant fluid openings (11) for introducing the coolant fluid into the hollow body and for evacuating said fluid from the same, said other flat-sided surface being concave and elastically deformable between the coolant fluid openings. Said device also comprises a fixing device (5) for fixing the concave other surface to the even surface (41) of a support (4) in such a way that the concave surface and the even surface are pressed against each other by the elastically planar deformation of the concave surface and that the coolant fluid openings are sealed in a fluidproof manner by O-rings. A solid strut (60), which interconnects the two flat-sided surfaces is additionally configured in the hollow body. The invention relates to a module (1') consisting of said cooling device and an assembly (1'', 1''') comprising the cooling device or module and a support. The device is used for electric transmissions, in particular of motor vehicles.

IPC 1-7

H01L 23/473; **H01L 23/373**

IPC 8 full level

H05K 7/20 (2006.01); **H01L 23/373** (2006.01); **H01L 23/473** (2006.01)

CPC (source: EP US)

H01L 23/3735 (2013.01 - EP US); **H01L 23/473** (2013.01 - EP US); **H01L 2924/0002** (2013.01 - EP US)

Citation (search report)

See references of WO 03098686A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 03098686 A1 20031127; AU 2003240418 A1 20031202; AU 2003240418 A8 20031202; DE 10393078 D2 20050512; EP 1506576 A1 20050216; JP 2005531133 A 20051013; US 2005213304 A1 20050929; US 7187545 B2 20070306

DOCDB simple family (application)

DE 0301498 W 20030509; AU 2003240418 A 20030509; DE 10393078 T 20030509; EP 03729881 A 20030509; JP 2004506081 A 20030509; US 51527905 A 20050520