

Title (en)

POWER TOOLS WITH INTEGRATED CIRCUIT BOARDS

Title (de)

ELEKTROWERKZEUGE MIT LEITERPLATTEN

Title (fr)

OUTILS ÉLECTRIQUES POURVUS DE CARTES DE CIRCUITS INTÉGRÉS

Publication

EP 3602750 A4 20201111 (EN)

Application

EP 17902256 A 20170324

Priority

CN 2017078146 W 20170324

Abstract (en)

[origin: WO2018170906A1] A brushless motor (22) includes a casing (34) which at least partially accommodates a stator and a rotor, an end cap (40) located adjacent to an end of the brushless motor; and a circuit board (32) which contains a controller for the brushless motor. The circuit board is located outside of a region defined by the end cap and the casing. As the circuit board is placed outside of the casing and the end cap, there is no need to configure a separate heat-sink for the circuit board, but the end cap to which the circuit board is mounted becomes a large heat-sink for the circuit board. This provides improved heat dissipation efficiency for both the circuit board and the stator /rotor of the motor.

IPC 8 full level

H02K 9/06 (2006.01); **H02K 7/14** (2006.01); **H02K 9/02** (2006.01); **H02K 9/22** (2006.01); **H02K 11/215** (2016.01); **H02K 11/33** (2016.01)

CPC (source: EP US)

H02K 7/145 (2013.01 - EP); **H02K 9/02** (2013.01 - EP); **H02K 9/227** (2021.01 - EP US); **H02K 11/215** (2016.01 - EP); **H02K 11/33** (2016.01 - EP); **H02K 2211/03** (2013.01 - EP)

Citation (search report)

- [XYI] US 2013313925 A1 20131128 - MERGENER MATTHEW J [US], et al
- [Y] WO 2010035547 A1 20100401 - HITACHI KOKI KK [JP], et al
- See references of WO 2018170906A1

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

DOCDB simple family (publication)

WO 2018170906 A1 20180927; AU 2017405808 A1 20191010; AU 2017405808 A2 20201119; CN 211908570 U 20201110; EP 3602750 A1 20200205; EP 3602750 A4 20201111

DOCDB simple family (application)

CN 2017078146 W 20170324; AU 2017405808 A 20170324; CN 201790001632 U 20170324; EP 17902256 A 20170324