

Title (en)
PRINTED CIRCUIT BOARD PROVIDED WITH AN INTEGRATED INDUCTOR DEVICE

Title (de)
LEITERPLATTE MIT INTEGRIERTER INDUKTORVORRICHTUNG

Title (fr)
CARTE DE CIRCUIT IMPRIMÉ MUNIE D'UN DISPOSITIF INDUCTEUR INTÉGRÉ

Publication
EP 4160630 A1 20230405 (EN)

Application
EP 22196869 A 20220921

Priority
IT 202100024580 A 20210924

Abstract (en)
A printed circuit board (1) having: at least one insulating plate (3) provided with a plurality of conductive tracks (4) defining respective electrical conductors; and an inductor device (2), which is supported by the insulating plate (3), is electrically connected to the conductive tracks (4) and has a toroidal magnetic core (6) and at least one coil (8) arranged around the toroidal magnetic core (6). The inductor device (2) has a plurality of conductive rigid bars (9), which are "U"-shaped, are arranged astride the toroidal magnetic core (6) and each have two straight legs (10) connected to one another by a cusp (11). The insulating plate (3) has a plurality of through holes (5), each engaged by an end of a corresponding leg (10) of a conductive bar (9). The insulating plate (3) has conductive tracks (4), which connect the legs (10) of the conductive bars (9) so as to create an electrical circuit, which is part of the inductor device (2) and closes the conductive bars (9) around the toroidal magnetic core (6) so as to define respective turns of the coil (8).

IPC 8 full level
H01F 17/06 (2006.01); **H01F 27/28** (2006.01); **H01F 27/30** (2006.01); **H01F 27/32** (2006.01)

CPC (source: EP)
H01F 17/062 (2013.01); **H01F 27/2895** (2013.01); **H01F 27/306** (2013.01); **H01F 27/324** (2013.01)

Citation (applicant)
• CN 202178142 U 20120328 - SHENZHEN MEGMEET ELECTRICAL CO
• DE 102016210746 A1 20171221 - VACUUMSCHMELZE GMBH & CO KG [DE]
• EP 1071103 A1 20010124 - MAGNETEK SPA [IT]
• JP H03133109 A 19910606 - MITSUBISHI ELECTRIC CORP
• US 2010253459 A1 20101007 - ZIMMERMAN ALAN W [US], et al

Citation (search report)
• [X] CN 202178142 U 20120328 - SHENZHEN MEGMEET ELECTRICAL CO
• [X] DE 102016210746 A1 20171221 - VACUUMSCHMELZE GMBH & CO KG [DE]
• [X] EP 1071103 A1 20010124 - MAGNETEK SPA [IT]
• [X] JP H03133109 A 19910606 - MITSUBISHI ELECTRIC CORP
• [X] US 2010253459 A1 20101007 - ZIMMERMAN ALAN W [US], et al
• [A] US 4975672 A 19901204 - MCLYMAN COLONEL W T [US]
• [A] EP 2061043 A1 20090520 - HAMILTON SUNDSTRAND CORP [US]
• [A] US 4639707 A 19870127 - TANAKA KAZUHIRO [JP], et al
• [A] EP 2711941 A1 20140326 - HAMILTON SUNDSTRAND CORP [US]
• [A] US 2003127244 A1 20030710 - CHO ALBERT [TW]

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

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4160630 A1 20230405; IT 202100024580 A1 20230324

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EP 22196869 A 20220921; IT 202100024580 A 20210924