

Title (en)

PLANAR WINDING STRUCTURE FOR POWER TRANSFORMER

Title (de)

PLANARE WICKLUNGSSTRUKTUR FÜR LEISTUNGSTRANSFORMATOR

Title (fr)

STRUCTURE D'ENROULEMENT PLANE POUR TRANSFORMATEUR DE PUISSANCE

Publication

**EP 4160631 A1 20230405 (EN)**

Application

**EP 22169666 A 20220425**

Priority

- US 202163179784 P 20210426
- US 202117471142 A 20210909

Abstract (en)

The present disclosure provides a printed circuit board (PCB) based planar winding structure (500) for a main power transformer and/or an auxiliary power need. The PCB-based planar winding structure (500) can confine electric field through magnetic core potential control and thus create partial discharge (PD) free design for medium voltage (MV) applications. Meanwhile, the winding structure can be formed in the PCB manufacturing process to create a more modular and reliable structure, thereby enhancing manufacturability. Techniques, such as termination treatment, primary and secondary winding arrangements, etc., can be used to control the electrical stress in the medium voltage applications.

IPC 8 full level

**H01F 27/28** (2006.01); **H01F 27/29** (2006.01); **H01F 27/32** (2006.01); **H01F 27/36** (2006.01)

CPC (source: EP)

**H01F 27/2804** (2013.01); **H01F 27/29** (2013.01); **H01F 27/327** (2013.01); **H01F 27/36** (2013.01); **H01F 2027/2809** (2013.01)

Citation (applicant)

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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

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