

Title (en)
HIGH-FREQUENCY TRANSFORMER

Title (de)
HOCHFREQUENZTRANSFORMATOR

Title (fr)
TRANSFORMATEUR HAUTE FREQUENCE

Publication
EP 3564975 A1 20191106 (EN)

Application
EP 19168863 A 20181010

Priority
• IT 201700119003 A 20171020
• EP 18199516 A 20181010

Abstract (en)
Transformer, comprising at least one pair of juxtaposed bearing tubular elements, rigidly connected to one another at least at one end, being at the opposite end connected to appropriate support means, and being arranged on each of said bearing tubular elements a plurality of annular ferromagnetic elements sized to cooperate with said tubular elements and adapted to form the core of said transformer, the windings of said transformer being arranged coaxially with said tubular elements, in which the bearing tubular elements are extruded in insulating plastic material, which have an outer diameter corresponding to the inner diameter of the cores, and present on the outer wall a plurality of axial grooves equidistant from each other angularly, suitable for housing the turns of the primary, being provided a central duct for each tubular element designed to house the turns of at least one secondary winding.

IPC 8 full level
H01F 27/28 (2006.01); **H01F 27/30** (2006.01); **H01F 27/32** (2006.01); **H01F 30/10** (2006.01)

CPC (source: EP)
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Citation (applicant)
• GB 1385867 A 19750305 - MARCONI CO LTD
• EP 1496527 A1 20050112 - LINCOLN GLOBAL INC [US]
• EP 1675139 A2 20060628 - LINCOLN GLOBAL INC [US]

Citation (search report)
• [Y] SEUNGHUN SAMUEL BAEK ET AL: "Accurate equivalent circuit modeling of a medium-voltage and high-frequency coaxial winding DC-link transformer for solid state transformer applications", ENERGY CONVERSION CONGRESS AND EXPOSITION (ECCE), 2012 IEEE, IEEE, 15 September 2012 (2012-09-15), pages 1439 - 1446, XP032467457, ISBN: 978-1-4673-0802-1, DOI: 10.1109/ECCE.2012.6342645
• [Y] RAULS MARK S ET AL: "Multiturn High-Frequency Coaxial Winding Power Transformers", IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 31, no. 1, 1 January 1995 (1995-01-01), pages 112 - 118, XP011645419, ISSN: 0093-9994, [retrieved on 20170410], DOI: 10.1109/28.363042
• [A] TANG WEI-JIA, JIANG DAO-ZHUO, YIN RUI, LIANG YI-QIAO, WANG YU-FEN: "Design of coaxial transformer for modular isolated DC/DC converters", JOURNAL OF ZHEJIANG UNIVERSITY (ENGINEERING SCIENCE), vol. 51, no. 8, 1 August 2017 (2017-08-01) - 1 August 2017 (2017-08-01), pages 1646 - 1652, XP002794310

Cited by
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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

DOCDB simple family (publication)
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DOCDB simple family (application)
EP 18199516 A 20181010; EP 19168863 A 20181010; IT 201700119003 A 20171020