Title (en)

Transformator

Title (de)

Transformator

Title (fr)

Transformateur

Publication

EP 2182533 A1 20100505 (DE)

Application

EP 08018770 A 20081028

Priority

EP 08018770 A 20081028

Abstract (en)

The transformer (11) comprises a core limb (22) to which three windings (32) are arranged next to each other, where the lines of the windings are insulatedly guided against each other, each winding is formed from a core near lower tension winding (34), which is winded by an assigned upper tension winding (36) and the lines of the lower tension winding are axially guided so that the lateral distance between the windings is minimized. The lines of the lower tension windings are guided parallel to the core limbs in the region between the lower- and upper-tension windings. The transformer (11) comprises a core limb (22) to which three windings (32) are arranged next to each other, where the lines of the windings are insulatedly guided against each other, each winding is formed from a core near lower tension winding (34), which is winded by an assigned upper tension winding (36) and the lines of the lower tension winding are axially guided so that the lateral distance between the windings is minimized. The lines of the lower tension windings are guided parallel to the core limbs in the region between the lower- and upper-tension windings. The lines of the lower tension windings are displaced to each other at 120[deg] and are guided to the periphery parallel to the core limbs. The lines of the lower tension windings are guided parallel in one-side manner, to the core limbs. The lines of the nearly arranged lower tension windings are guided to one side and the lines of the other two lower tension windings are guided axially parallel to core limbs to opposite sides. The axial parallely lines guided to the core limbs are equipped with a shrink tube. A shell-like spacer holder is interposed between the lower tension windings and the surrounding upper tension windings, where the radial extent of the spacer corresponds to the thickness of the lines and an annular gap is formed between the lower tension windings and the upper tension windings. An axis-parallel free spacer remains between each of the shell-like spacer holders interposed between lower tension windings and upper tension windings for lines. The shell-like spacer holder interposed between lower tension windings and upper tension windings, has a breadth that extends over a winding area of less than 120[deg] . A channel is proved in the annular gap for flowing with cooling liquid. Three core limbs are provided with three windings formed from lower and upper tension windings arranged next to each other, where the ends on both sides, of the core limbs are connected by a yoke.

Abstract (de)

Die Erfindung betrifft einen Transformator (11) mit wenigstens einem Kernschenkel (22), auf welchem drei Wicklungen (32) nebeneinander angeordnet sind, deren Ableitungen (28, 30) jeweils gegeneinander isoliert herausgeführt sind, wobei jede Wicklung (32) von einer Kern nahen Unterspannungswicklung (34) gebildet ist, welche jeweils von einer zugeordneten Oberspannungswicklung (36) umwickelt ist und die Ableitungen (30) der Unterspannungswicklungen (34) axial herausgeführt sind, so dass der seitliche Abstand der Wicklungen (32) zueinander minimiert ist.

IPC 8 full level

H01F 30/12 (2006.01); H01F 5/04 (2006.01)

CPC (source: EP US)

H01F 5/04 (2013.01 - EP US); H01F 30/12 (2013.01 - EP US)

Citation (applicant)

- JP 2000243636 A 20000908 TOSHIBA CORP
- US 6208230 B1 20010327 SHIOTA HIROMU [JP]

Citation (search report)

- [A] US 6208230 B1 20010327 SHIOTA HIROMU [JP]
- [A] JP 2000243636 A 20000908 TOSHIBA CORP

Cited by

US2017062123A1; US9972433B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2182533 A1 20100505; EP 2182533 B1 20111214; AT E537541 T1 20111215; BR PI0919623 A2 20151201; BR PI0919623 A8 20171226; BR Pl0919623 A8 20221122; BR Pl0919623 A8 20221213; BR Pl0919623 B1 20231226; CA 2740908 A1 20100506; CA 2740908 C 20151229; CN 102197447 A 20110921; CN 102197447 B 20130918; ES 2378712 T3 20120417; JP 2012507161 A 20120322; KR 101555962 B1 20150930; KR 20110081192 A 20110713; PL 2182533 T3 20120531; RU 2011121676 A 20121210; RU 2509387 C2 20140310; UA 100778 C2 20130125; US 2011221556 A1 20110915; US 8344840 B2 20130101; WO 2010049041 A1 20100506

DOCDB simple family (application)

EP 08018770 A 20081028; AT 08018770 T 20081028; BR Pl0919623 A 20090919; CA 2740908 A 20090919; CN 200980143768 A 20090919; EP 2009006785 W 20090919; ES 08018770 T 20081028; JP 2011533555 A 20090919; KR 20117008296 A 20090919; PL 08018770 T 20081028; RU 2011121676 A 20090919; UA A201105416 A 20090919; US 201113095360 A 20110427