

Title (en)

SUPERCONDUCTOR DEVICE FOR OPERATING IN AN EXTERNAL MAGNETIC FIELD

Title (de)

SUPRALEITEREINRICHTUNG ZUM BETRIEB IN EINEM EXTERNEN MAGNETFELD

Title (fr)

DISPOSITIF SUPRACONDUCTEUR POUR UNE UTILISATION DANS UN CHAMP MAGNÉTIQUE EXTÉRIEUR

Publication

EP 3433882 A1 20190130 (DE)

Application

EP 17715063 A 20170322

Priority

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- EP 2017056770 W 20170322

Abstract (en)

[origin: WO2017162714A1] The invention relates to a superconductor device (1a, 1b) for operating in an external alternating magnetic field, having two superconductive contact elements (2) and a current conducting section (5) which connects the contact elements in a longitudinal direction that corresponds to the power flow direction from one contact element (2) to the other contact element (2) and which comprises a superconductive layer applied onto a substrate (8). The superconductive layer is at least partially interrupted in the longitudinal direction by means of a recess (4), in order to form individual filaments (3) which form current paths for transporting current. At least two adjacent filaments (3) are connected in a conductive manner by omitting the recess (4) in an intersection region (6) which is formed on the substrate (8) and where four current paths are conductively connected. At least one ohmic resistance barrier (7), in particular one respective ohmic resistance barrier, is provided in current paths of the adjacent filaments (3), said current paths lying opposite one another with respect to the intersection and being offset in a layer plane longitudinal direction and in a layer plane transverse direction perpendicular to the longitudinal direction.

IPC 8 full level

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Citation (search report)

See references of WO 2017162714A1

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