

Title (en)
INDUCTIVE COMPONENT AND METHOD FOR PRODUCING THE SAME

Title (de)
INDUKTIVES BAUELEMENT UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
COMPOSANT INDUCTIF ET PROCEDE DE FABRICATION ASSOCIE

Publication
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Application
EP 02742919 A 20020426

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• DE 10128004 A 20010608
• EP 0204644 W 20020426

Abstract (en)
[origin: DE10128004A1] The invention relates to an inductive component (10) whose soft-magnetic core (11) consists of a powder composite. Said powder composite is produced by mixing a ferromagnetic amorphous or nanocrystalline alloy powder with a ferromagnetic dielectric powder and a thermoplastic or duroplastic polymer. Unlike conventional injection-molded or cast soft-magnetic cores, cores from a composite comprising a dielectric ferromagnetic powder allow for packing densities of substantially more than 55 % by volume.
[origin: DE10128004A1] Inductive device with winding(s) has a soft magnetic core of a ferromagnetic powder composite consisting of a ferromagnetic alloy powder (I) of an amorphous or nanocrystalline alloy, a ferromagnetic dielectric powder (II) and a thermoplastic or thermosetting polymer (III). Independent claims are also included for the following: (1) production of the device by preparing a mold, (I), (II) and (III), and either: (i) Filling the mold with (I) and (II), adding (III) and curing (III); or (ii) Mixing (I), (II) and (III), filling the mold with the resultant powder and curing; and (2) the use of ferromagnetic carbonyl metal powders for the production of soft magnetic cores of inductive devices.

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