

Title (en)
Surface mount electronic component with a grooved core

Title (de)
Oberflächenmontiertes elektronisches Bauelement mit gerilltem Kern

Title (fr)
Composant électronique à montage en surface avec noyau rainuré

Publication
EP 0747913 B1 20001004 (EN)

Application
EP 96108606 A 19960530

Priority
US 46442195 A 19950605

Abstract (en)
[origin: EP0747913A1] A method for fabricating electronic components such as transformers and inductors having wire windings formed from a metal sheet rather than from manual winding of wire. Grooves (12 and 17) are formed in the surface of a core (11) during a molding process. The core (11) is then covered with an insulating layer and a metal film. Metal windings (13 and 18) are carved with one of several methods that rely on parallel grooves (12 and 17) to isolate and pattern each continuous winding. An additional embodiment describes the use of a second insulating layer (14) and a second metal film (16) to modify a component such that the component operates in re-entrant mode. This additional embodiment widens the operational bandwidth of any electronic component with at least two metal windings such as a transformer or coupled inductors. <IMAGE>

IPC 1-7
H01F 17/06; **H01F 27/36**

IPC 8 full level
H01F 41/08 (2006.01); **H01F 17/00** (2006.01); **H01F 17/06** (2006.01); **H01F 27/36** (2006.01)

CPC (source: EP US)
H01F 17/0033 (2013.01 - EP); **H01F 17/062** (2013.01 - EP); **H01F 27/36** (2013.01 - EP); **H01F 27/363** (2020.08 - EP US);
H01F 2017/004 (2013.01 - EP)

Cited by
EP2105937A1; JP2016025150A; EP3754677A1; FR3097366A1; WO03005579A1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0747913 A1 19961211; **EP 0747913 B1 20001004**; DE 69610524 D1 20001109; DE 69610524 T2 20010517; JP H08330142 A 19961213

DOCDB simple family (application)
EP 96108606 A 19960530; DE 69610524 T 19960530; JP 14989296 A 19960521