

Title (en)

NON LINEAR CERAMIC RESISTOR HAVING A LOW THRESHOLD VOLTAGE, AND PROCESS FOR ITS PRODUCTION

Publication

EP 0034511 A3 19810909 (FR)

Application

EP 81400054 A 19810116

Priority

FR 8003044 A 19800212

Abstract (en)

[origin: EP0034511A2] The invention aims to obtain varistors (resistors made from ceramic material with a non-linear characteristic of the current as a function of voltage) having low threshold voltage, of the order of 5 to 10 volts. For this purpose, the fact is used that the threshold voltage (starting point of an exponential increase in the ohmic value) depends on the intergranular potential barriers of the crystallites situated in the ceramic between the two electrodes. Therefore the diameter of the grains is increased, up to a limit of some twenty microns, and the electrodes are brought together until 50 microns apart by constructing interdigitated metallisations (11, 12) deposited on a plate (1) made from a material based on ZnO sintered so as to exhibit the desired grain size. Application to the protection of electronic circuits. <IMAGE>

IPC 1-7

H01C 7/10; **H01C 1/142**

IPC 8 full level

H01C 7/10 (2006.01); **H01C 1/142** (2006.01); **H01C 7/102** (2006.01)

CPC (source: EP)

H01C 1/142 (2013.01); **H01C 7/102** (2013.01)

Citation (search report)

- [X] FR 2146453 A1 19730302 - GEN ELECTRIC
- FR 1491465 A 19670811 - LORRAINE CARBONE
- FR 2286804 A1 19760430 - THOMSON CSF [FR]
- DE 2528090 A1 19760122 - GEN ELECTRIC
- [A] JOURNAL OF APPLIED PHYSICS, Vol. 51, No 1, Janvier 1980 New York, US F.A. SELIM et al.: "Low voltage ZnO varistor: Device process and defect model", pages 765-768

Cited by

FR2513032A1

Designated contracting state (EPC)

DE GB IT NL

DOCDB simple family (publication)

EP 0034511 A2 19810826; **EP 0034511 A3 19810909**; BR 8100814 A 19810825; FR 2475791 A1 19810814; FR 2475791 B1 19830513; JP S56125807 A 19811002

DOCDB simple family (application)

EP 81400054 A 19810116; BR 8100814 A 19810210; FR 8003044 A 19800212; JP 1759681 A 19810210