Title (en)

METHOD OF MANUFACTURING A CERAMIC ZNO-BASED VOLTAGE-DEPENDENT RESISTOR

Publication

EP 0200126 B1 19900926 (DE)

Application

EP 86105433 A 19860419

Priority

CH 180885 A 19850429

Abstract (en)

[origin: US4767729A] A voltage-dependent ceramic resistance (varistor) based on ZnO and other addition elements, mostly in the form of oxides, is prepared, in that the addition elements are added to a suspension of ZnO powder in H2O as chemical substances in the form of aqueous, mutually compatible, non-separating solutions of organic salts, acids, complex compounds and/or colloids, the suspension/aqueous solution formed in this manner is dried in the presence of air in a spray dryer, the free-flowing powder/granules prepared in this manner are pressed to a body and the pressed body is subjected to heat treatment, in order to decompose the organic substances, convert them into oxides, remove the decomposition products, and is finally sintered by successive heating to 650 DEG C., 900 DEG C. and 1100 DEG to 1300 DEG C. The water-soluble chemical substances to be used are preferably organic salts such as formates, acetates, lactates, tartrates, citrates, ammonium citrates and ammonium tartrates. Other suitable additions ar ammonia, ammonium salts of hydroxycarboxylic acids, organic amines, ammonium tetraborate, ammonium dichromate, ammonium silicotungstate, oligo-silicic acid and silicon hydroxide sol.

IPC 1-7

H01C 7/10; H01C 17/30

IPC 8 full level

H01C 7/112 (2006.01); **H01C 17/30** (2006.01)

CPC (source: EP US)

H01C 7/112 (2013.01 - EP US); **H01C 17/30** (2013.01 - EP US)

Cited by

DE3619620A1; DE3830597A1; EP0667626A3; US5614138A; CN112335001A; EP0762438A3; US5807510A; EP2409952A4; US11557410B2; WO2020007553A1

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