

Title (en)

Radiation cross-linking of ptc conductive polymers.

Title (de)

Vernetzung von PTC-leitfähigen Polymeren durch Strahlung.

Title (fr)

Réticulation par irradiation des polymères conducteurs PTC.

Publication

**EP 0311142 B1 19931215 (EN)**

Application

**EP 88117360 A 19820402**

Priority

- US 25049181 A 19810402
- US 25435281 A 19810415

Abstract (en)

[origin: EP0311142A2] The higher the voltage applied to an electrical device comprising a PTC conductive polymer, the more likely it is that intermittent application of the voltage will cause the device to fail. According to the invention, the likelihood of such failure is substantially reduced by irradiating the PTC conductive polymer (1) so that it is very highly cross-linked, for example to a dosage of at least 50 Mrads, preferably at least 80 Mrads, especially at least 120 Mrads. In this way, for example, it is possible to make a circuit protection device which will continue to provide effective protection even after repeated exposure to a voltage of 200 volts.

IPC 1-7

**H01C 7/02**; **H01C 1/14**

IPC 8 full level

**H01B 1/20** (2006.01); **H01C 7/02** (2006.01)

CPC (source: EP)

**H01B 1/24** (2013.01); **H01C 7/027** (2013.01); **H05B 3/12** (2013.01)

Cited by

US5814264A; US6130597A; CN1090087C; DE19548741A1; US7820950B2; DE102007007617A1; WO2020016853A1; EP0780849A2; WO9739461A1; WO9805503A1; WO9629711A1; WO9706660A3; US10373745B2; US10822513B1; US11859094B2; EP2224784A1; DE102009010437A1; US8283612B2; EP2148337A1; DE102008034748A1; US9560697B2; DE102008063849A1; US8383997B2

Designated contracting state (EPC)

AT BE CH DE FR IT LI NL SE

DOCDB simple family (publication)

**EP 0311142 A2 19890412**; **EP 0311142 A3 19890426**; **EP 0311142 B1 19931215**; DE 3279970 D1 19891109; DE 3280447 D1 19940127; DE 3280447 T2 19940714; EP 0063440 A2 19821027; EP 0063440 A3 19830413; EP 0063440 B1 19891004; GB 2096393 A 19821013; GB 2096393 B 19860102; HK 83689 A 19891027; JP H053101 A 19930108; SG 89388 G 19890714

DOCDB simple family (application)

**EP 88117360 A 19820402**; DE 3279970 T 19820402; DE 3280447 T 19820402; EP 82301765 A 19820402; GB 8209923 A 19820402; HK 83689 A 19891019; JP 17506791 A 19910716; SG 89388 A 19881228