

Title (en)

Electrical heating device with safety circuit

Title (de)

Elektrische Heizvorrichtung mit Schutzschaltung

Title (fr)

Dispositif de chauffage électrique avec circuit de protection

Publication

EP 1173045 A3 20030122 (DE)

Application

EP 01113987 A 20010608

Priority

DE 10034063 A 20000713

Abstract (en)

[origin: EP1173045A2] Power MOSFETs (T1,T2,Tn) (heating elements) drain terminals (D) are connected to a common junction point (N2) through temperature sensitive thyristors (S1,S2,Sn). The gate terminals of the MOFSETs are connected through series circuits of diodes (D1,D2,Dn) and resistors (R1,R2,Rn) to this junction. If the temperature of a defective transistor reaches a set limit the thyristor turns on raising the gate potential of the healthy transistors to such a level that the load current operates the fuse (Si).

IPC 1-7

H05B 1/02

IPC 8 full level

H05B 1/02 (2006.01)

CPC (source: EP)

H05B 1/0205 (2013.01)

Citation (search report)

- [X] GB 2076056 A 19811125 - LUCAS INDUSTRIES LTD
- [AD] DE 19733045 C1 19980730 - FAHRZEUGKLIMAREGELUNG GMBH [DE]
- [A] EP 0031475 A1 19810708 - SIEMENS AG [DE]
- [A] US 3393870 A 19680723 - JEFFREY EDWARD N

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1173045 A2 20020116; EP 1173045 A3 20030122; EP 1173045 B1 20040825; DE 10034063 A1 20020131; DE 10034063 C2 20031016; DE 50103377 D1 20040930

DOCDB simple family (application)

EP 01113987 A 20010608; DE 10034063 A 20000713; DE 50103377 T 20010608