

Title (en)  
Electric heater

Title (de)  
Elektrischer Zuheizer

Title (fr)  
Chauffage électrique

Publication  
**EP 2019268 A3 20100707 (DE)**

Application  
**EP 08000980 A 20080118**

Priority  
• EP 07014115 A 20070718  
• EP 08000980 A 20080118

Abstract (en)  
[origin: EP2017545A1] The heater includes a layer structure set within a housing (2) along with contact lugs (14) that connect the heater to a power source. The layer structure includes heat generating components (10) each having at least one PTC heating unit (8) having both sides in abutment with printed conductors. At least one heat dissipating unit (12) is thermal contact with the heat generating component. The contact lugs are formed by stamped sheet metal pieces electrically connected to selected printed conductors.

IPC 8 full level  
**F24H 3/04** (2006.01); **F24H 9/18** (2006.01)

CPC (source: EP KR US)  
**F24H 3/0405** (2013.01 - EP KR US); **F24H 3/0429** (2013.01 - EP KR US); **F24H 3/0435** (2013.01 - EP KR US);  
**F24H 3/0441** (2013.01 - EP KR US); **F24H 3/0447** (2013.01 - EP KR US); **F24H 3/0464** (2013.01 - EP KR US);  
**F24H 3/0476** (2013.01 - EP KR US); **F24H 9/1863** (2013.01 - EP KR US); **F24H 9/1872** (2013.01 - EP KR US)

Citation (search report)  
• [XAI] EP 1130337 A2 20010905 - ELTEK SPA [IT]  
• [X] EP 1731852 A1 20061213 - CEBI SPA [IT]  
• [X] US 2003015520 A1 20030123 - JIANG GUOMO [CN]

Cited by  
EP2275753A1; DE202009019076U1; EP3088816A1; EP2275753B1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**EP 2017545 A1 20090121**; **EP 2017545 B1 20120425**; CN 101349475 A 20090121; CN 101349475 B 20110727; CN 101349476 A 20090121;  
CN 101349476 B 20100602; EP 2017549 A1 20090121; EP 2017549 B1 20120502; EP 2019268 A2 20090128; EP 2019268 A3 20100707;  
EP 2019268 B1 20121226; ES 2382138 T3 20120605; JP 2009035247 A 20090219; JP 2009051494 A 20090312; JP 4856127 B2 20120118;  
JP 4856128 B2 20120118; KR 100970043 B1 20100716; KR 101028509 B1 20110411; KR 20090009130 A 20090122;  
KR 20090009131 A 20090122; US 2009020619 A1 20090122; US 2009026189 A1 20090129; US 8680435 B2 20140325

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**EP 07014115 A 20070718**; CN 200810133573 A 20080717; CN 200810133574 A 20080717; EP 07014721 A 20070726;  
EP 08000980 A 20080118; ES 07014115 T 20070718; JP 2008181635 A 20080711; JP 2008181636 A 20080711; KR 20080069623 A 20080717;  
KR 20080069628 A 20080717; US 17439608 A 20080716; US 17513408 A 20080717