

Title (en)

Heater with PTC and fixed resistance elements

Title (de)

Heizelement versehen mit PTC und feststehenden Widerstandelemente

Title (fr)

Élément de chauffage constitué d'éléments PTC et résistifs fixés

Publication

**EP 1001655 A2 20000517 (EN)**

Application

**EP 99308933 A 19991109**

Priority

US 18938298 A 19981109

Abstract (en)

A heater (10) includes a relatively fixed resistance heating element (14) for providing a greater heating rate at lower ambient temperatures and/or high heat transfer environments. The heater further includes a relatively variable resistance heating PTC (positive temperature coefficient) element (23, 25) which has a resistance which increases in response to increased temperature, thereby providing self-regulation by way of reduced heat at increased temperatures. The relatively fixed (14) and variable resistance heating elements (23, 25) are typically provided on opposite sides of a heating pad (12), but may be separated by a dielectric layer (26) and both formed on a single side of the heating pad (12). <IMAGE>

IPC 1-7

**H05B 3/34**

IPC 8 full level

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CPC (source: EP KR)

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Cited by

CN112555975A; EP3532762A4; US7205510B2; WO02060309A1; US7306283B2; WO2004047493A1

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