

Title (en)
TEMPERATURE-SENSING CONTROL SYSTEM AND METHOD FOR INTEGRATED CIRCUITS

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EP 0512009 A4 19931020 (EN)

Application
EP 91903017 A 19901126

Priority
US 9006878 W 19901126

Abstract (en)
[origin: WO9210032A1] A temperature-control system includes an integrated circuit (14) and a sequence controller (12) therefore, wherein the sequence controller (12) provides instructions and/or data to the integrated circuit (14) which performs operations according to the instructions on the data. A temperature recognition intervention mechanism is provided which intervenes, via the sequence controller (12), with the operational rate of the integrated circuit (14) in relation to different temperature conditions which occur in the integrated circuit (14), thus providing security against temperature-induced damage to the integrated circuit (14). A method of the invention includes detecting a temperature-related parameter of the integrated circuit (14), determining the rate of change of the temperature (76) of the integrated circuit (14) and, if the rate of change indicates that the integrated circuit (14) will exceed a first predetermined temperature, providing noop (82) instructions to the integrated circuit (14) for a predetermined number of system cycles to allow the integrated circuit (14) to cool to an acceptable temperature. If the rate of change of the temperature indicates that the integrated circuit (14) will reach a temperature higher than a second predetermined temperature value, the frequency of noop instructions will increase or the integrated circuit (14) will be shut down (86).

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H03K 17/08

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Citation (search report)
• [X] DE 3516989 A1 19861113 - SIEMENS AG [DE]
• [X] PATENT ABSTRACTS OF JAPAN vol. 014, no. 438 (P-1108)19 September 1990 & JP-A-02 171 813 (HITACHI) 3 July 1990
• [A] IBM TECHNICAL DISCLOSURE BULLETIN vol. 16, no. 5, October 1973, NEW YORK US pages 1422 - 1423 HONG 'Thermal printer chip protection circuit'
• See references of WO 9210032A1

Designated contracting state (EPC)
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