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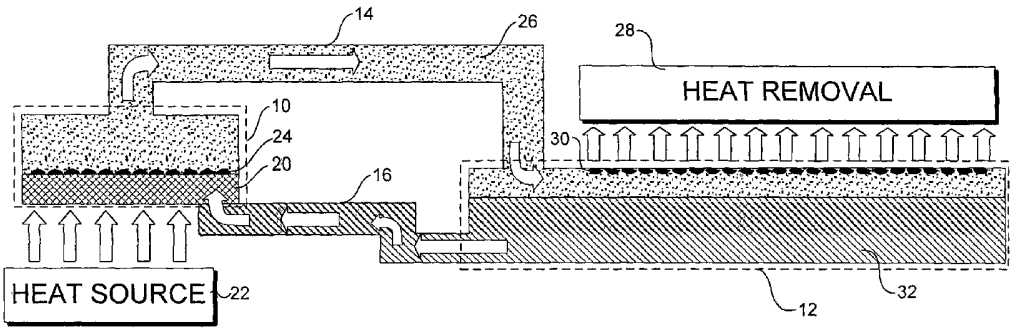
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(54) Title: MODULAR CAPILLARY PUMPED LOOP COOLING SYSTEM



(57) Abstract: The modular CPL cooling system transfers heat from high-power circuit components (22) in a chassis to other locations within or external to the chassis, where the heat can be more easily removed. The CPL cooling system includes one or more evaporators (10) connected to one or more condensers (12) via flexible liquid transport and vapor transport lines (16, 14). A wicking structure (20) is disposed within each evaporator (10). The wicking structure (20) draws working fluid (*e.g.*, water) in a liquid state into the evaporator (10) based on a capillary mechanism and a pressure differential across a meniscus formed at the liquid/vapor interface on an upper surface of the wicking structure (20). At this interface, liquid evaporates and absorbs energy from the heat source (22). The energy is transported by the vapor to the condenser (12) where the working fluid is condensed back into liquid, thereby releasing the energy.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 02/27857

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F28D15/04 H01L23/427

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F28D H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 5 761 037 A (CHRYSLER GREGORY MARTIN ET AL) 2 June 1998 (1998-06-02) column 3, line 45 -column 5, line 4; claims 4,8,9; figures ---	1,2,5-7, 11,26, 28,29 4,8-10, 12
Y	US 4 890 668 A (CIMA RICHARD M) 2 January 1990 (1990-01-02) column 9, line 52 - line 57; figures ---	4,8,12
Y	US 5 940 270 A (PUCKETT JOHN CHRISTOPHER) 17 August 1999 (1999-08-17) column 6, line 18 - line 32; figure 3 --- -/--	9,10

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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