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**Bechtolsheim et al.**

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[54] **SINGLE IN-LINE MEMORY MODULE**

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- [\*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).  
  
This patent is subject to a terminal disclaimer.

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**Related U.S. Application Data**

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- [63] Continuation of application No. 08/643,094, May 2, 1996, abandoned, which is a continuation of application No. 08/473,073, Jun. 7, 1995, Pat. No. 5,532,954, which is a continuation of application No. 08/345,477, Nov. 28, 1994, Pat. No. 5,465,229, which is a continuation of application No. 08/279,824, Jul. 25, 1994, Pat. No. 5,383,148, which is a continuation of application No. 08/115,438, Sep. 1, 1993, abandoned, which is a continuation of application No. 07/886,413, May 19, 1992, Pat. No. 5,270,964.

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- [51] **Int. Cl.**<sup>6</sup> ..... **G11C 13/00**
- [52] **U.S. Cl.** ..... **365/52; 365/51; 365/59; 365/63**
- [58] **Field of Search** ..... **365/52, 51, 58, 365/63, 59**

[57] **ABSTRACT**

A single in-line memory module (SIMM) for memory expansion in a computer system. The SIMM includes a plurality of memory chips surface-mounted on a printed circuit board. The printed circuit board includes a dual read-out connector edge adapted for insertion within a socket of the computer system. One or more driver chips may further be mounted on the printed circuit board and connected to distribute control signals to the memory chips. A full-width data path may further be connected between the dual read-out connector edge and the plurality of memory chips.

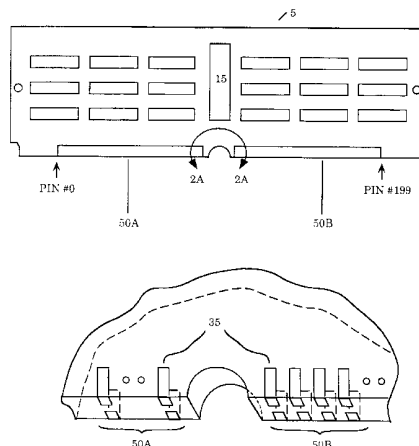
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**51 Claims, 6 Drawing Sheets**



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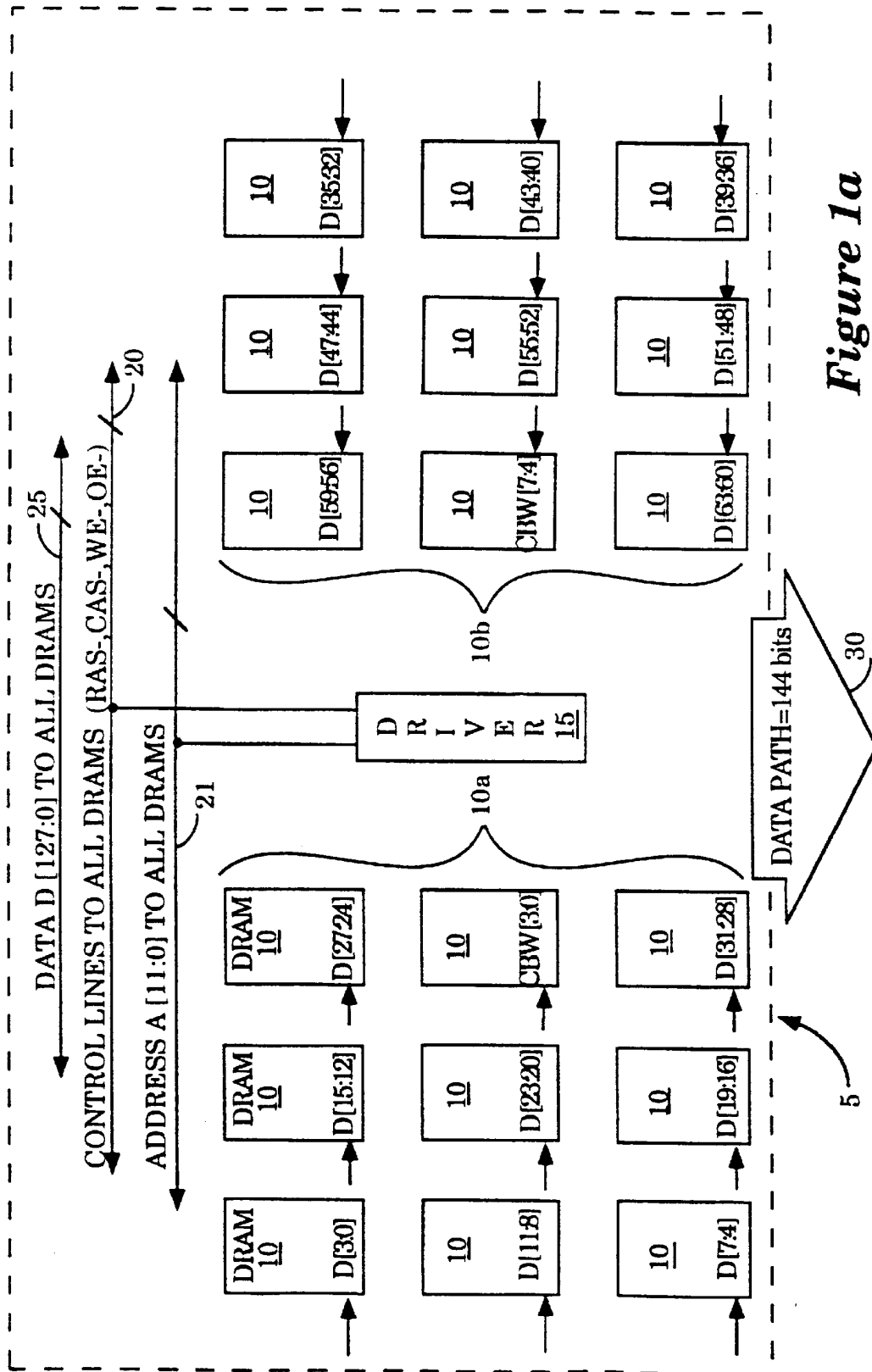


Figure 1a

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