

(12) **United States Patent**
Fujioka et al.

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(45) **Date of Patent:** **Feb. 6, 2001**

(54) **SEMICONDUCTOR INTEGRATED CIRCUIT MEMORY**

5,808,959 * 9/1998 Kengeri et al. 365/233
5,812,488 * 9/1998 Zagar et al. 365/233
6,094,380 * 7/1998 Kim 365/194

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FOREIGN PATENT DOCUMENTS

0 778 575 A2 6/1997 (EP) .

(73) Assignee: **Fujitsu Limited**, Kawasaki (JP)

OTHER PUBLICATIONS

International Publication No. WO 98/19248, published May 7, 1998.

(*) Notice: Under 35 U.S.C. 154(b), the term of this patent shall be extended for 0 days.

* cited by examiner

(21) Appl. No.: **09/340,147**

Primary Examiner—Richard Elms
Assistant Examiner—Hien Nguyen

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(30) **Foreign Application Priority Data**

(57) **ABSTRACT**

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(51) **Int. Cl.⁷** **G11C 8/00**

A semiconductor memory includes memory cell blocks, a burst-length information generating circuit which generates burst-length information based on a burst length, and a block enable circuit which receives the burst-length information. The block enable circuit selectively enables one of the memory cell blocks when the burst length is equal to or shorter than a predetermined burst length and selectively enables a plurality of memory cell blocks based on the burst length when the burst length is longer than the predetermined burst length. Data are read from the above-mentioned one or plurality of memory cell blocks.

(52) **U.S. Cl.** **365/233; 365/230.03; 365/238.5**

(58) **Field of Search** **365/233, 220, 365/203, 238.5, 221, 239, 230.03**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,386,385 1/1995 Stephens, Jr. 365/189.05
5,647,287 7/1997 McLaury et al. 365/230.01
5,703,828 12/1997 Park et al. 365/230.03
5,781,499 * 7/1998 Kohikawa 365/233

16 Claims, 20 Drawing Sheets

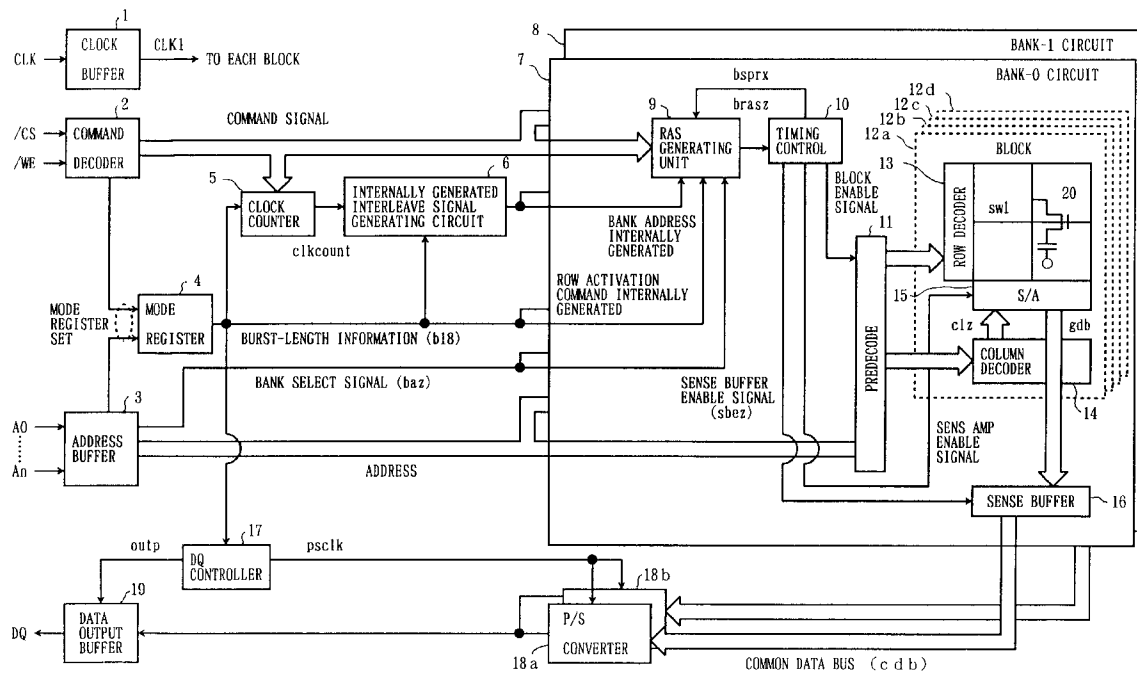


FIG. 1
PRIOR ART

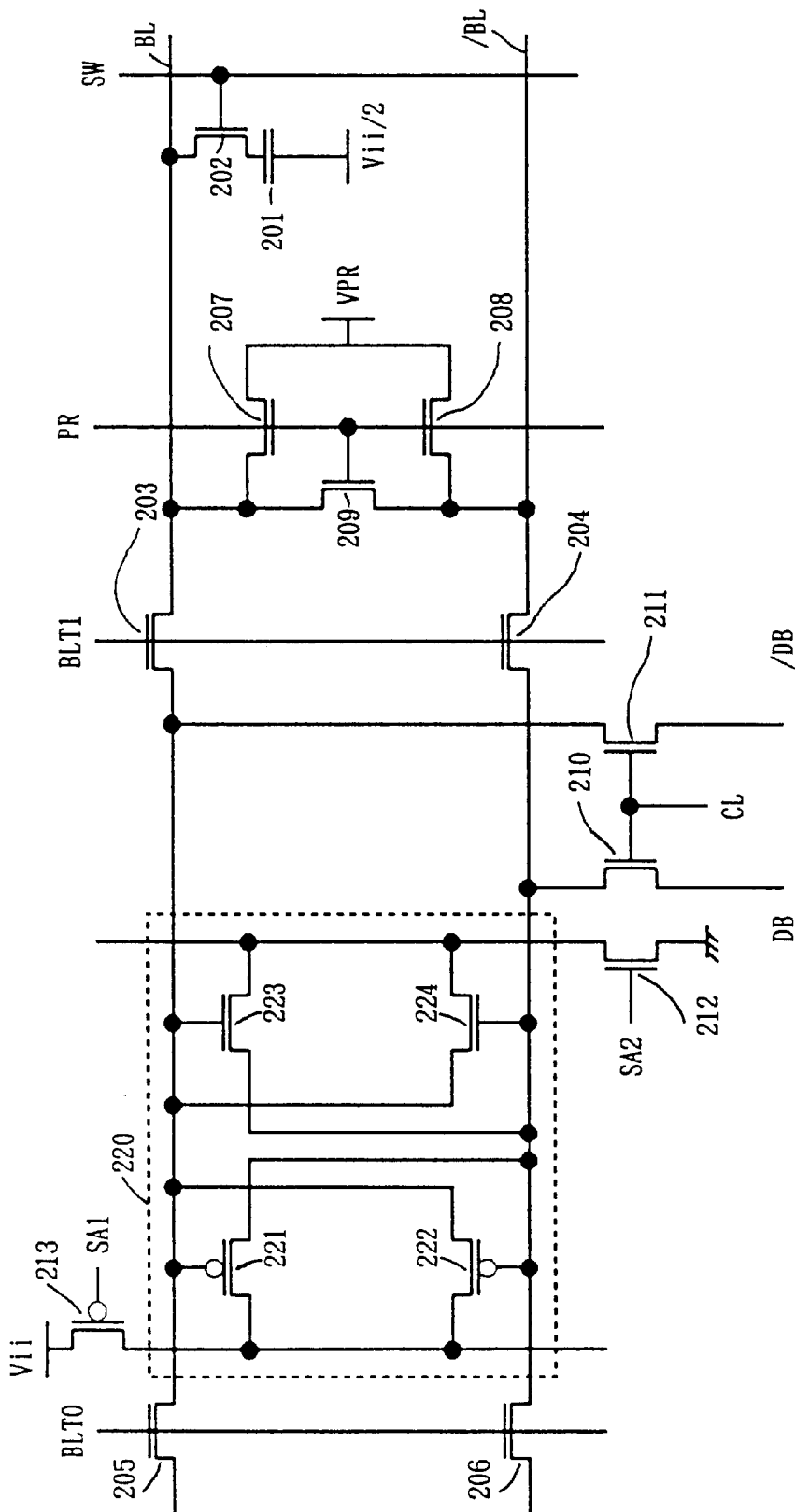


FIG. 2

PRIOR ART

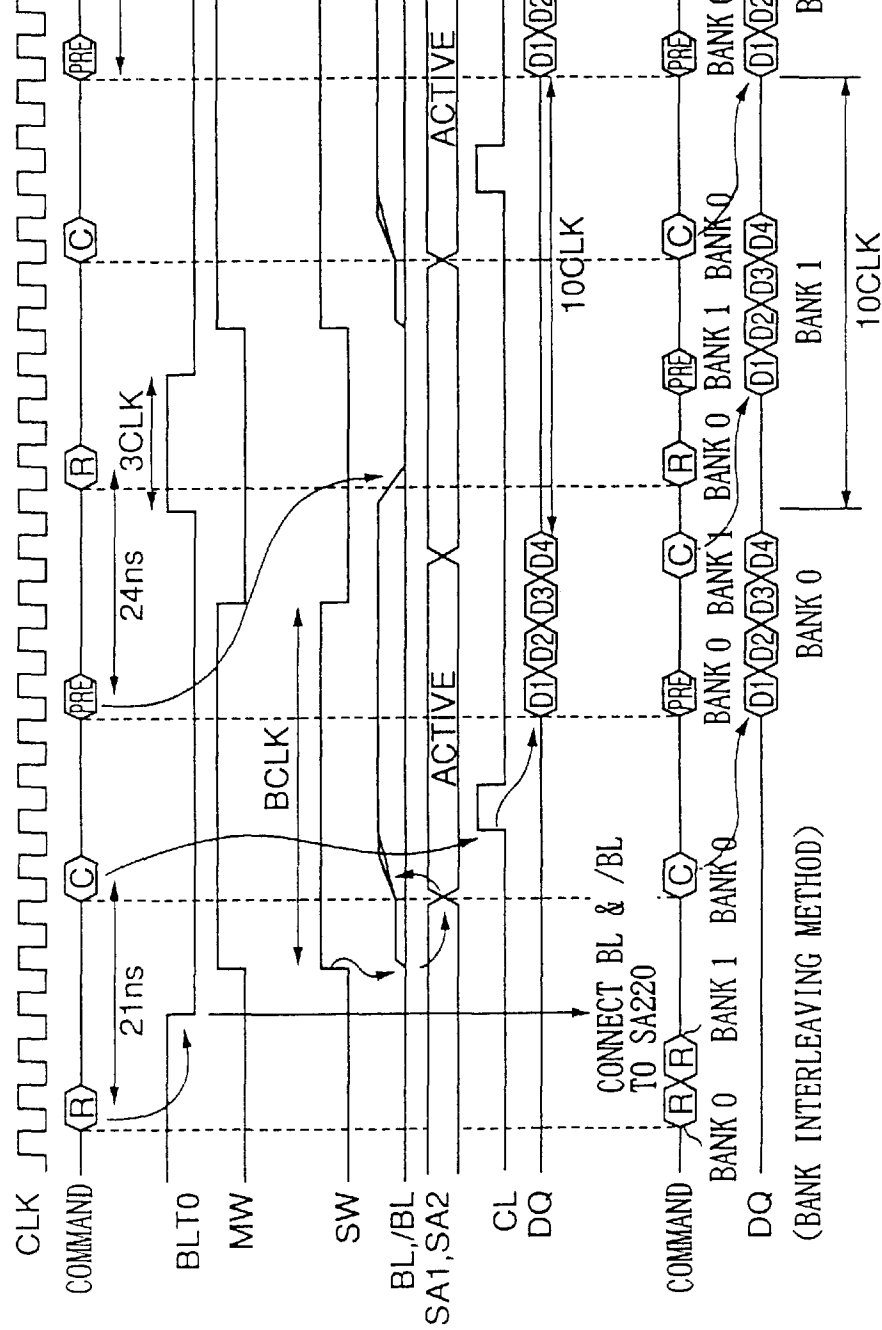


FIG. 3

PRIOR ART

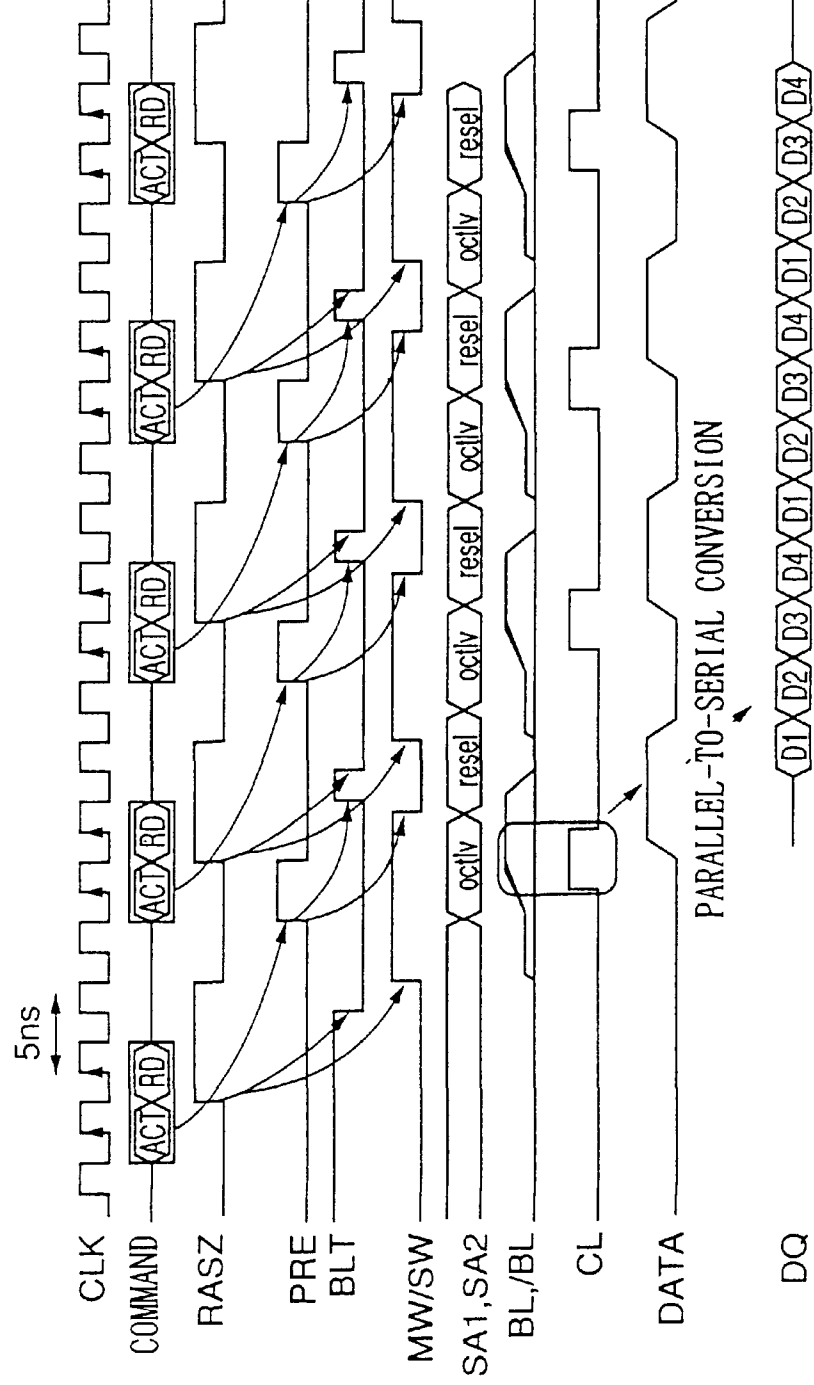
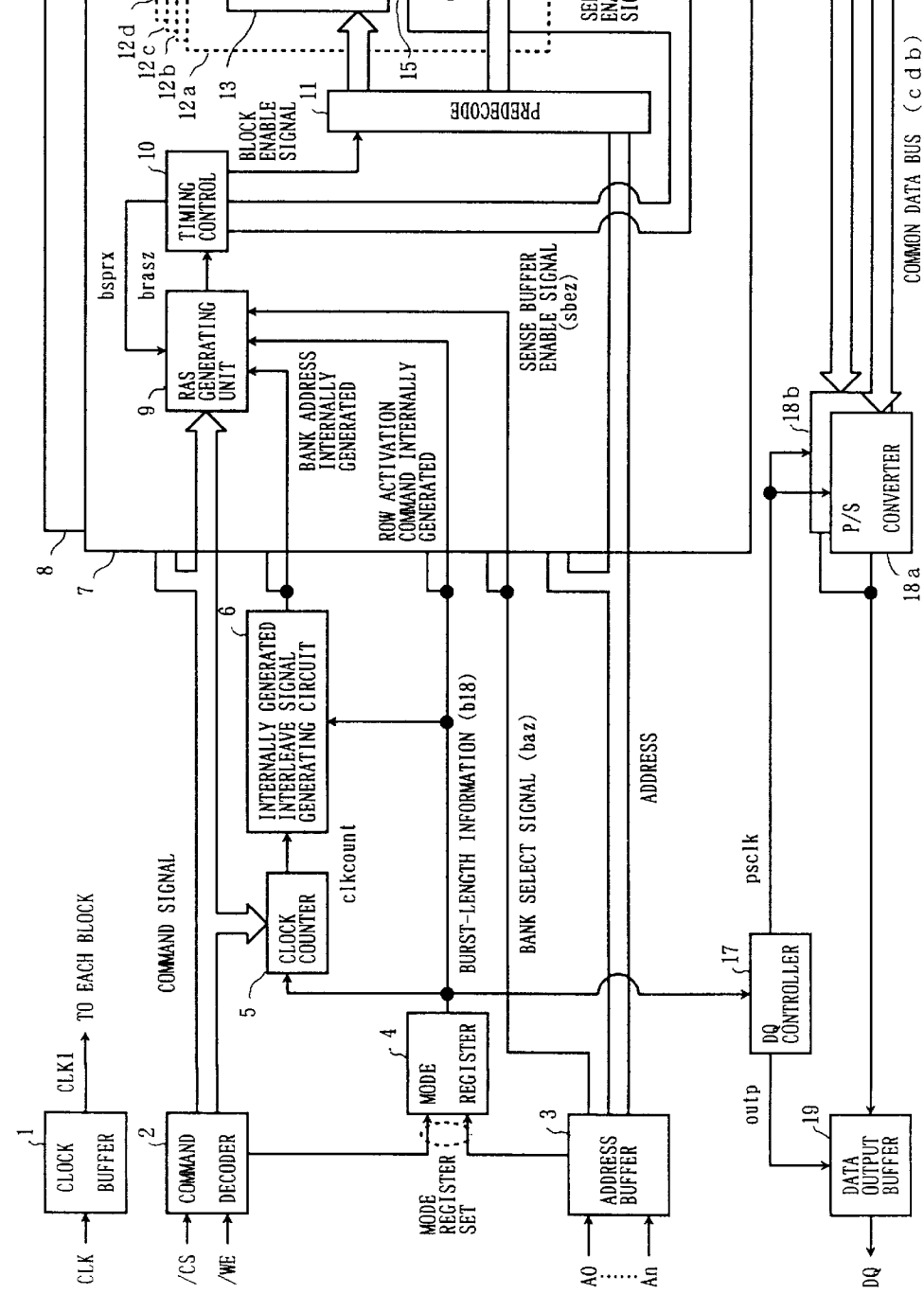


FIG. 4



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