



US005870340A

United States Patent [19]

Ohsawa

[11] Patent Number: **5,870,340**
 [45] Date of Patent: **Feb. 9, 1999**

[54] **MULTIPLEXER**[75] Inventor: **Takashi Ohsawa**, Yokohama, Japan[73] Assignee: **Kabushiki Kaisha Toshiba**, Kawasaki, Japan[21] Appl. No.: **889,441**[22] Filed: **Jul. 8, 1997****Related U.S. Application Data**

[62] Division of Ser. No. 763,036, Dec. 10, 1996, Pat. No. 5,701,095, which is a continuation of Ser. No. 393,076, Feb. 23, 1995, abandoned.

[30] **Foreign Application Priority Data**

Feb. 25, 1994 [JP] Japan 6-028593

[51] Int. Cl.⁶ **G11C 7/00**[52] U.S. Cl. **365/189.02; 365/201; 365/203**

[58] Field of Search 365/189.02, 201, 365/203, 189.05, 190

[56] **References Cited****U.S. PATENT DOCUMENTS**

4,280,212 7/1981 Ransom et al. 327/410
 4,645,944 2/1987 Uya 327/410

4,882,709 11/1989 Wyland 365/189.02
 4,888,739 12/1989 Frederick 365/189.02
 5,012,126 4/1991 Feldbaumer et al. 307/243
 5,262,990 11/1993 Mills et al. 365/189.02
 5,418,480 5/1995 Hastie et al. 327/408
 5,497,347 3/1996 Feng 365/189.02
 5,502,683 3/1996 Marchioro 365/189.02
 5,570,320 10/1996 Runas 365/189.02

FOREIGN PATENT DOCUMENTS

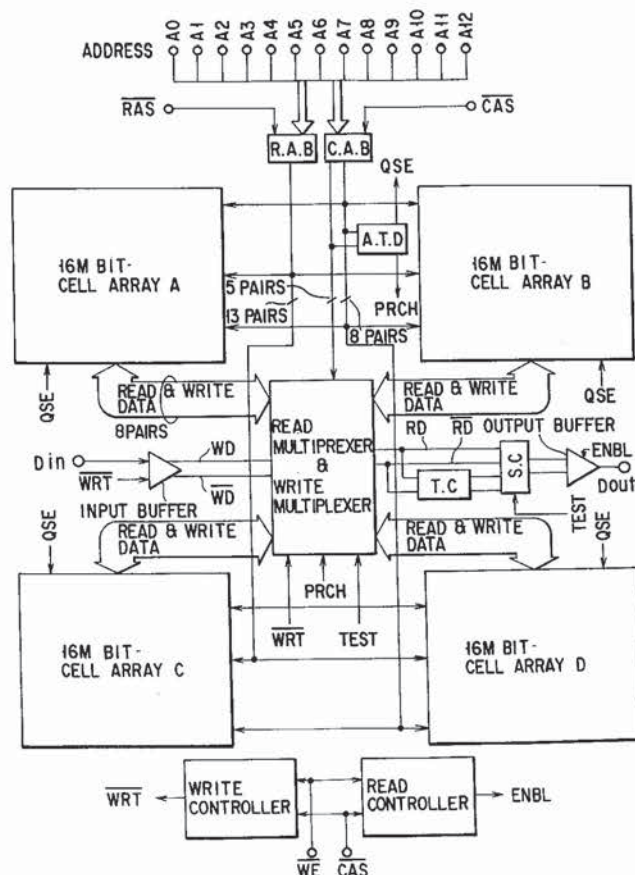
0 593 152 4/1994 European Pat. Off. .
 0 615 251 9/1994 European Pat. Off. .

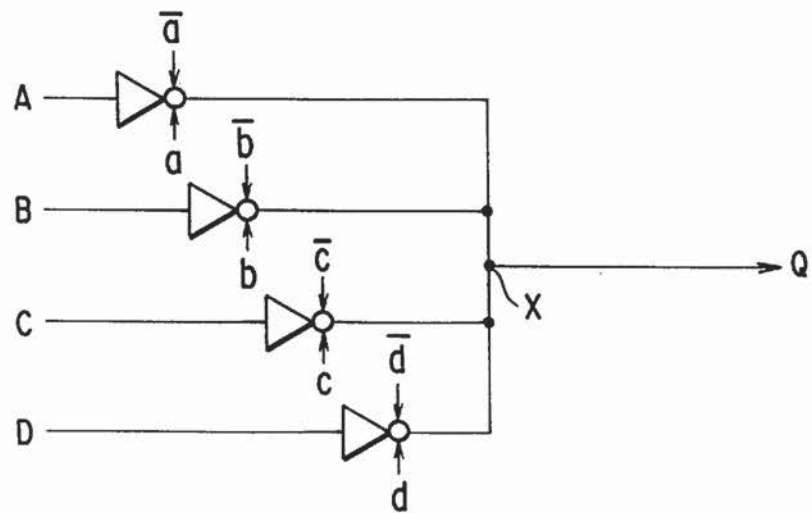
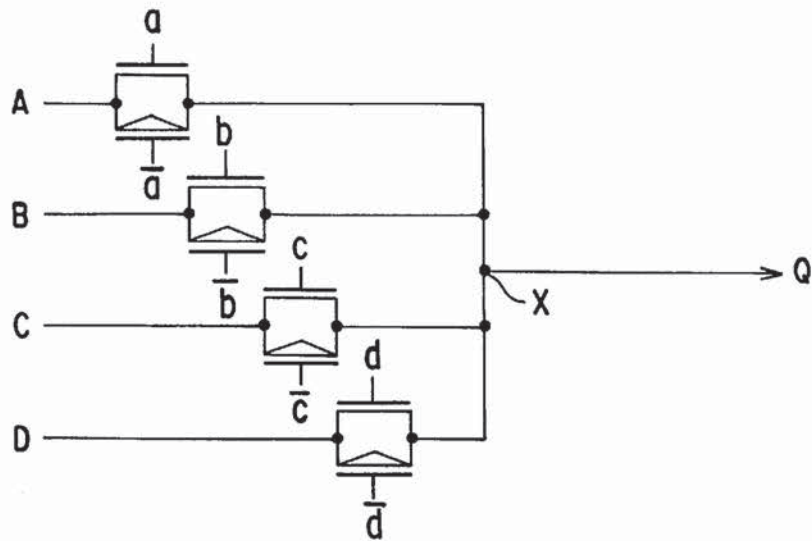
Primary Examiner—Tan T. Nguyen

Attorney, Agent, or Firm—Banner & Witcoff, Ltd.

[57] **ABSTRACT**

A semiconductor integrated circuit device has a data selecting circuit connected to a first power supply terminal, a precharge circuit, connected to a second power supply terminal, for receiving a precharge signal, and a wiring line connected to a common connection point between the data selecting circuit and the precharge circuit. The data selecting circuit includes at least two, i.e., first and second data transmission circuits. A first input data signal and a first selecting signal are supplied to the first data transmission circuit. A second input data signal and a second selecting signal are supplied to the second data transmission circuit.

25 Claims, 27 Drawing Sheets



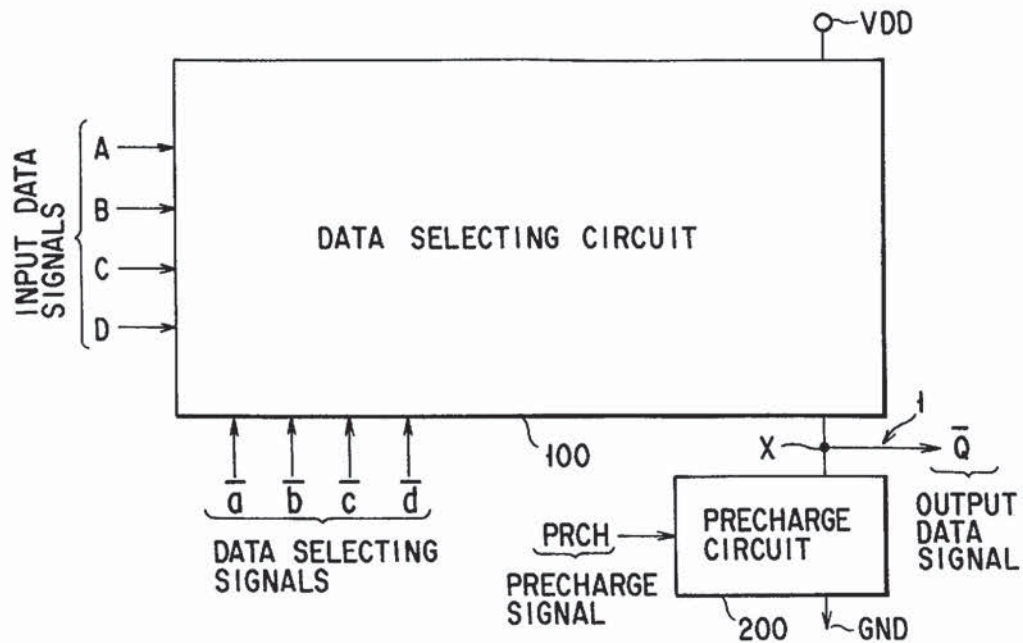


FIG. 3

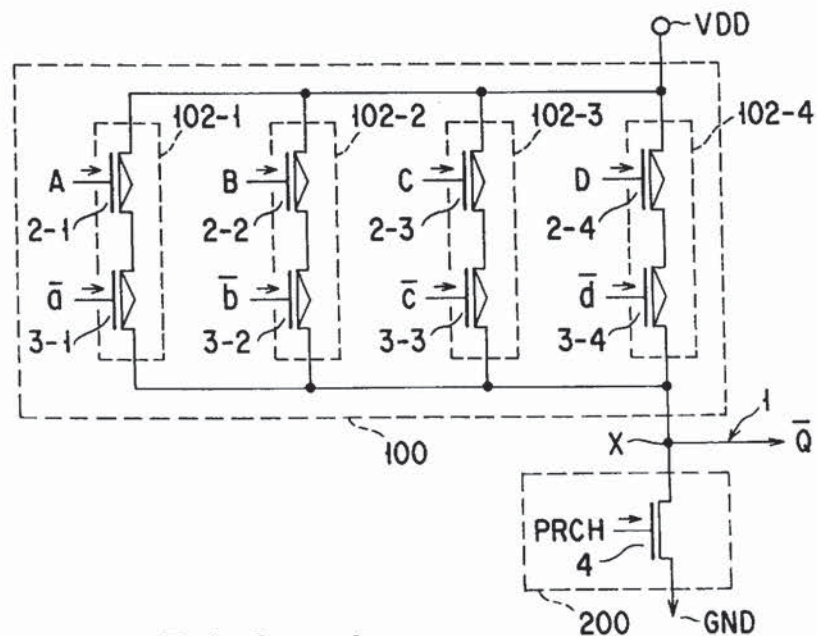


FIG. 4

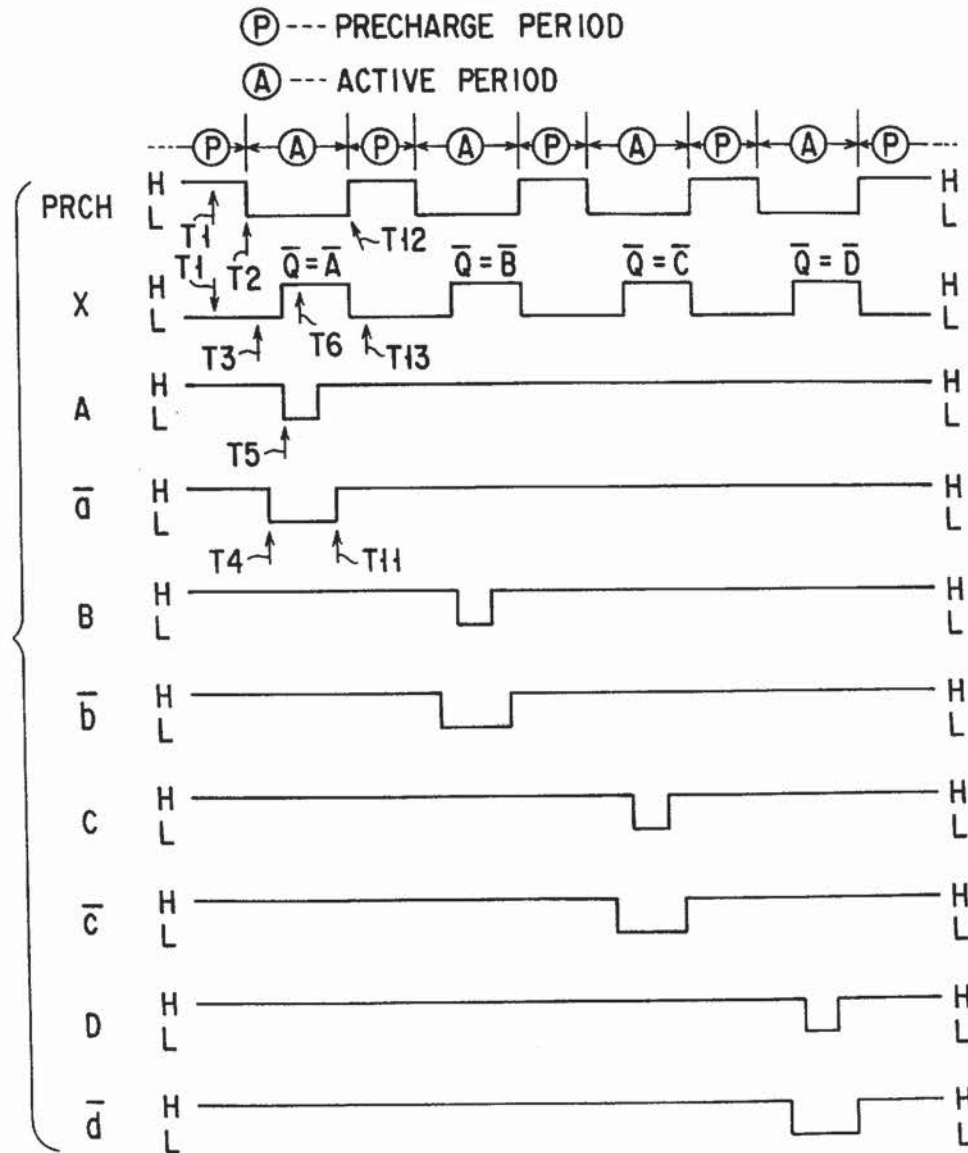


FIG. 5

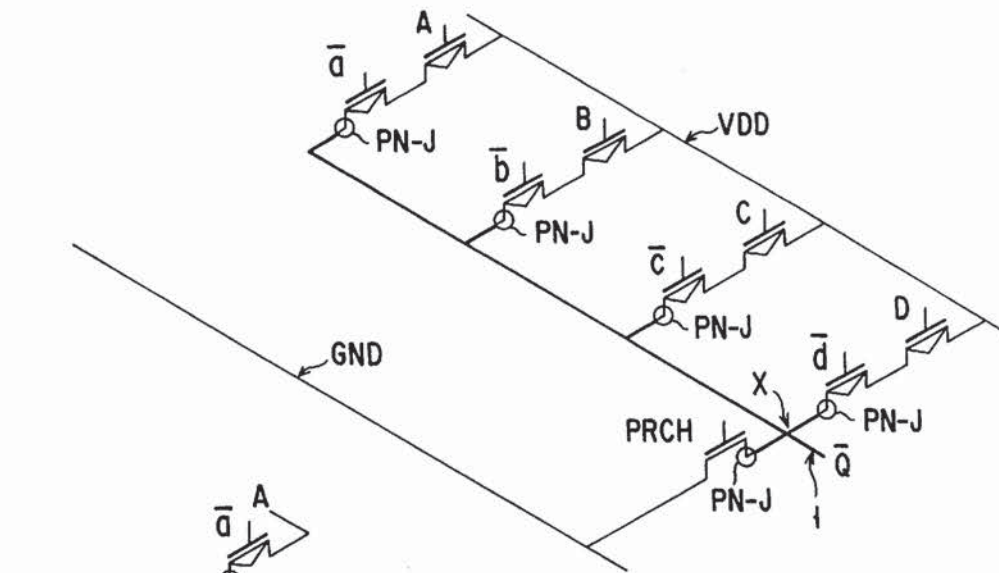
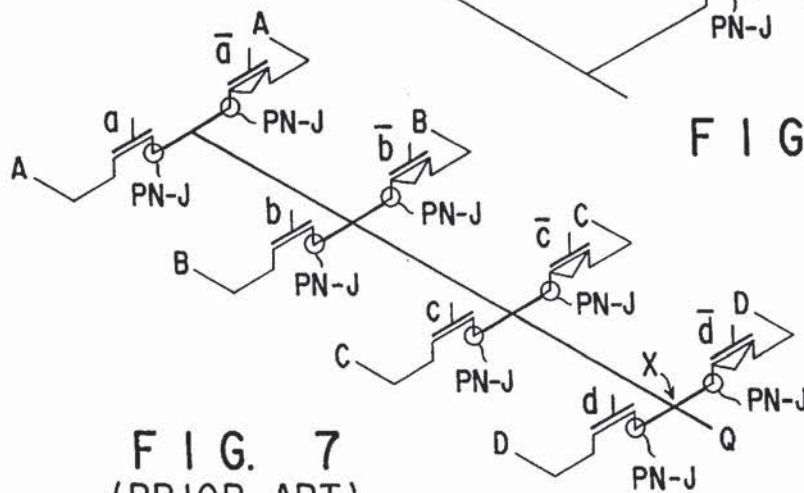
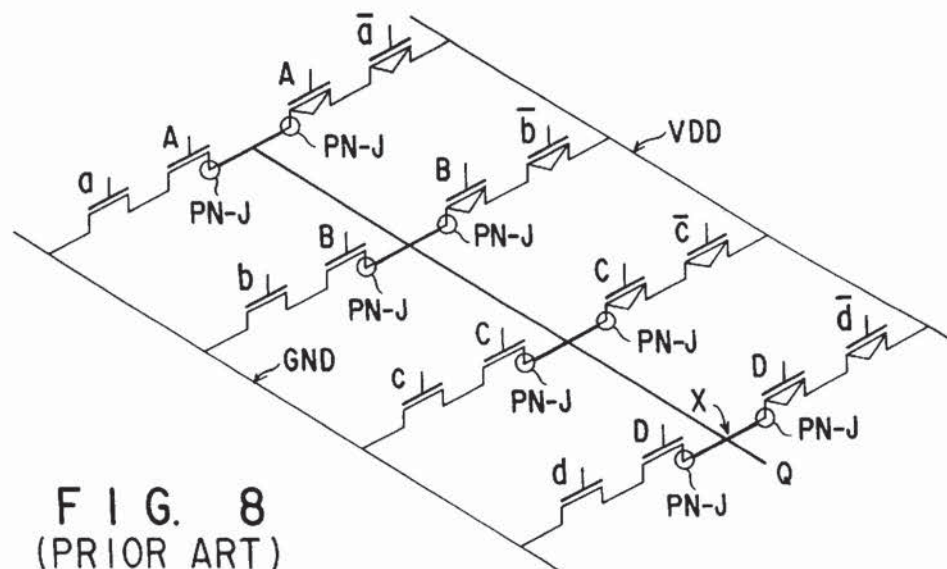


FIG. 6

FIG. 7
(PRIOR ART)FIG. 8
(PRIOR ART)

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.