



US006859645B2

(12) **United States Patent**
Yu

(10) **Patent No.:** **US 6,859,645 B2**
(45) **Date of Patent:** **Feb. 22, 2005**

(54) **SQUELCH DETECTION CIRCUIT**

(75) Inventor: **Jae-Suk Yu**, Seoul (KR)

(73) Assignee: **Samsung Electronics Co., Ltd.** (KR)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 700 days.

(21) Appl. No.: **09/957,985**

(22) Filed: **Sep. 21, 2001**

(65) **Prior Publication Data**

US 2002/0142743 A1 Oct. 3, 2002

(30) **Foreign Application Priority Data**

Mar. 30, 2001 (KR) 2001-16832

(51) **Int. Cl.**⁷ **H04B 1/10**

(52) **U.S. Cl.** **455/222; 455/218; 375/351; 327/551**

(58) **Field of Search** **455/222, 218, 455/550, 557, 556; 327/551; 330/258, 69**

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,724,545 A * 2/1988 Hamada 455/218
5,003,556 A * 3/1991 Curtis et al. 375/351
2003/0112058 A1 * 6/2003 Park 327/551

* cited by examiner

Primary Examiner—Melur Ramakrishnaiah

(74) *Attorney, Agent, or Firm*—Mills & Onello, LLP

(57) **ABSTRACT**

Disclosed is a transmission envelope detector referred to a squelch detection circuit for effectively detecting an element of transmission data in a high speed serial data transmission system. The squelch detection circuit of the invention includes a differential input level shifter, a first reference voltage generator, an amplifier, a second reference voltage generator, and a comparator. The squelch detection circuit can detect whether the transmission data is a noise or signal element even at a cross point of the transmission data, resulting in achieving stable data transmission.

8 Claims, 4 Drawing Sheets

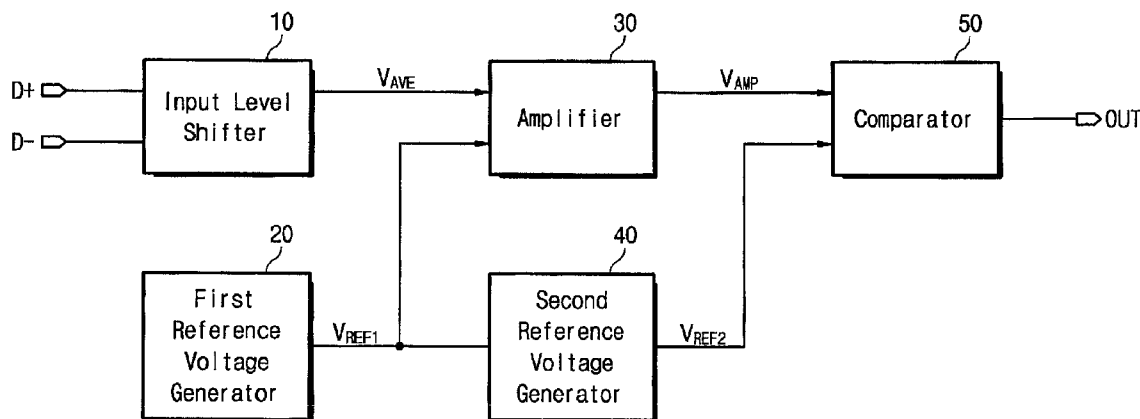


Fig. 1

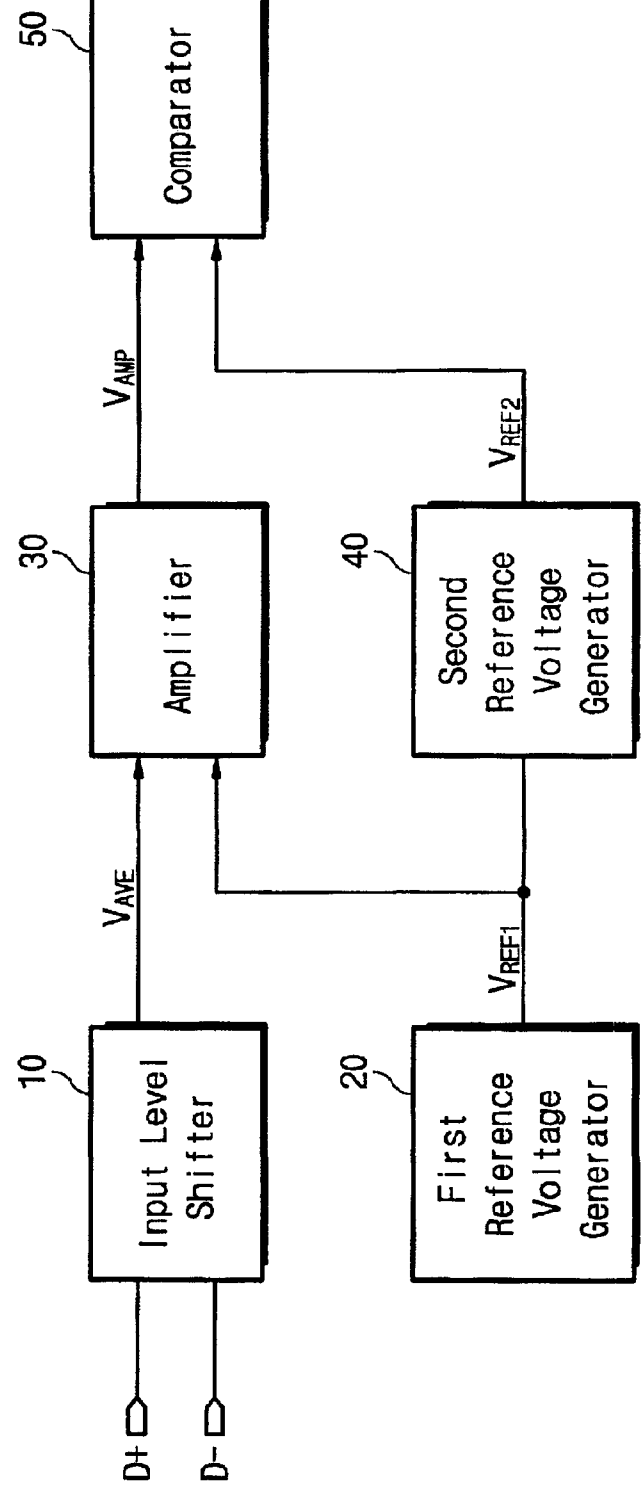


Fig. 2

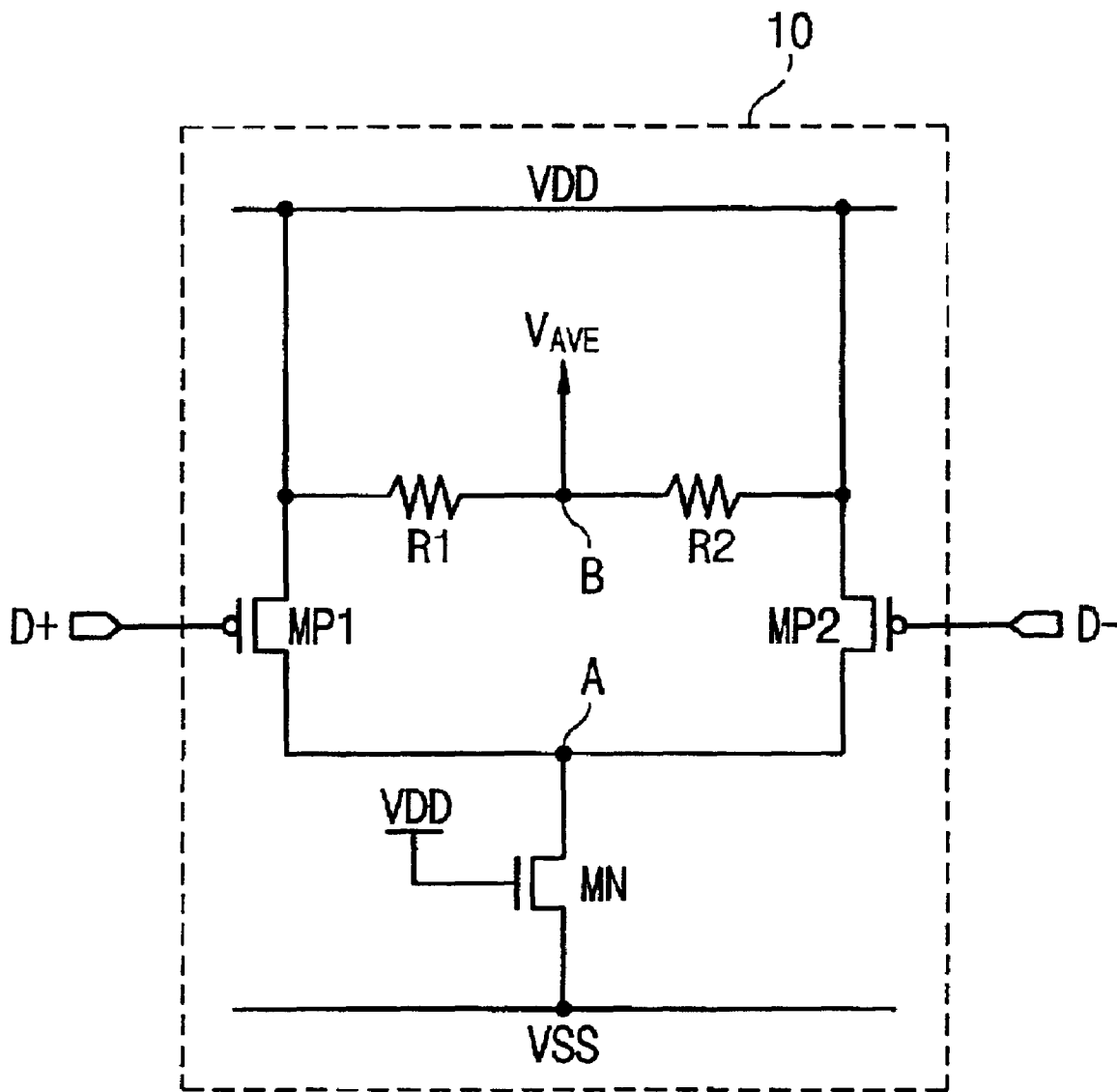


Fig. 3

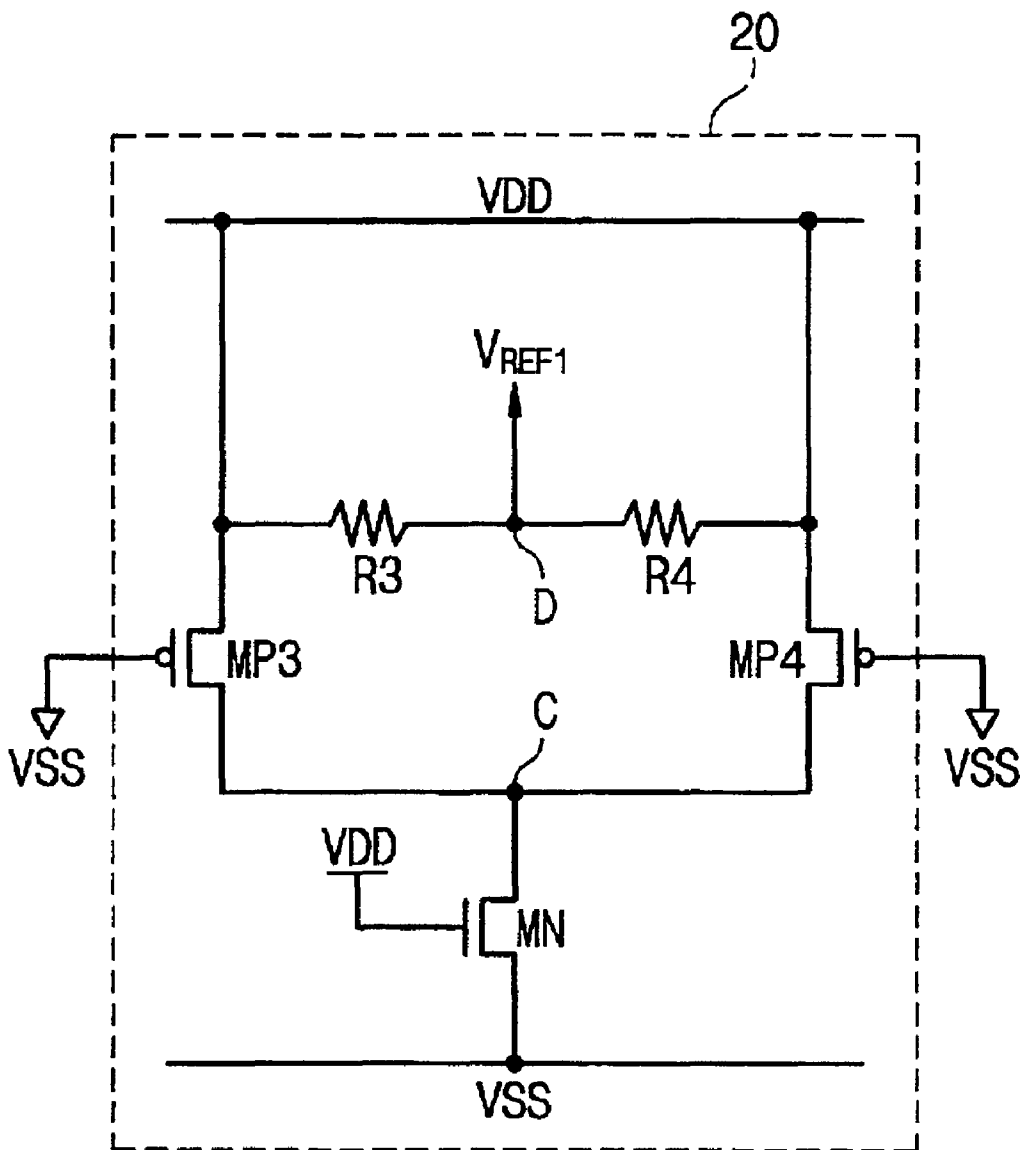


Fig. 4

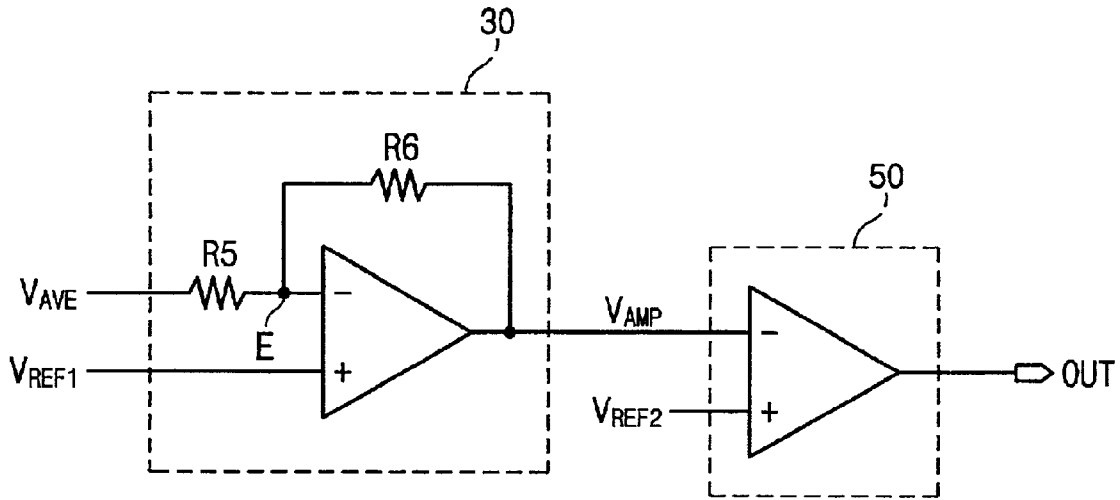
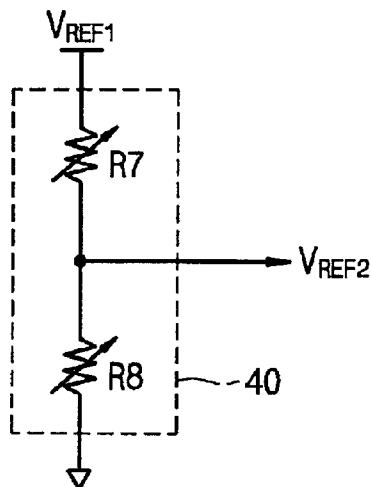


Fig. 5



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.