United States Patent [19]

Douseki et al.

[11] Patent Number: **5,486,774**

[45] Date of Patent: **Jan. 23, 1996**

[54] **CMOS LOGIC CIRCUITS HAVING LOW AND HIGH-THRESHOLD VOLTAGE TRANSISTORS**

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[21] Appl. No.: **333,235**

[22] Filed: **Nov. 2, 1994**

Related U.S. Application Data

[63] Continuation of Ser. No. 981,183, Nov. 24, 1992, abandoned.

[30] **Foreign Application Priority Data**

Nov. 26, 1991	[JP]	Japan	....	3-311007
Dec. 6, 1991	[JP]	Japan	....	3-323382
Dec. 9, 1991	[JP]	Japan	....	3-324512
Feb. 3, 1992	[JP]	Japan	....	4-017537

[51] **Int. Cl.^{6}** **H03K 19/0948**

[52] **U.S. Cl.** **326/33**; 326/81; 327/541

[58] **Field of Search** 307/443, 451, 307/475, 473, 296.8; 326/33, 81, 58; 327/541

[56] **References Cited**

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Attorney, Agent, or Firm—Blakely, Sokoloff, Taylor & Zafman
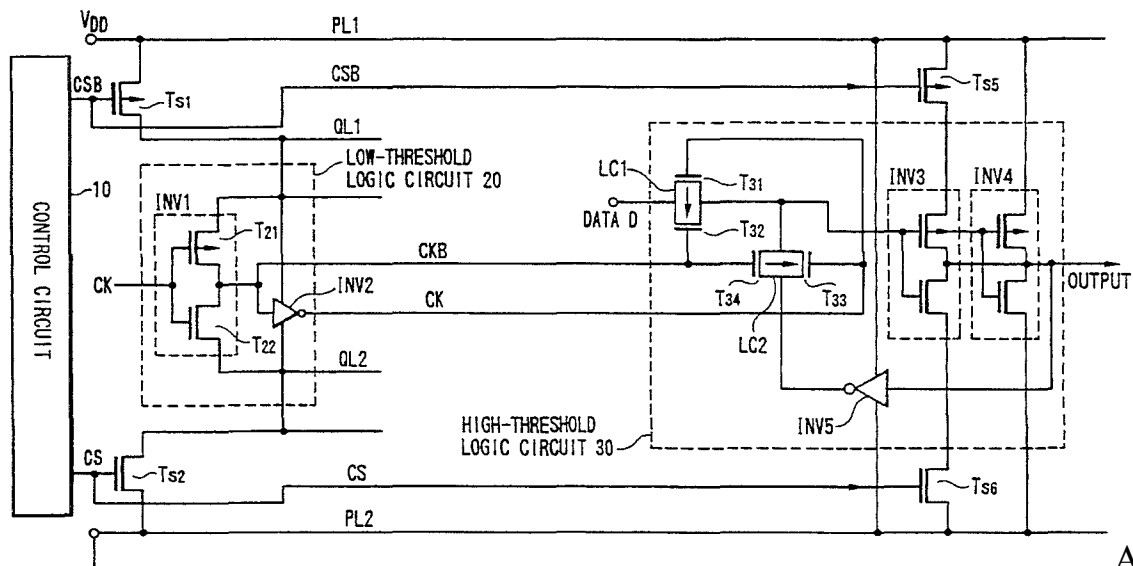
[57] **ABSTRACT**

A logic circuit includes a low-threshold logic circuit, a pair of first and second power lines, a first dummy power line, and a first high-frequency logic circuit. The low-threshold logic circuit has a logic circuit element constituted by a plurality of low-threshold field effect transistors. The pair of first and second power lines supply power to the low-threshold logic circuit. The first dummy power line is connected to one of power source terminals of the low-threshold logic circuit. The first high-threshold control transistor is arranged between the first dummy power line and the first power line.

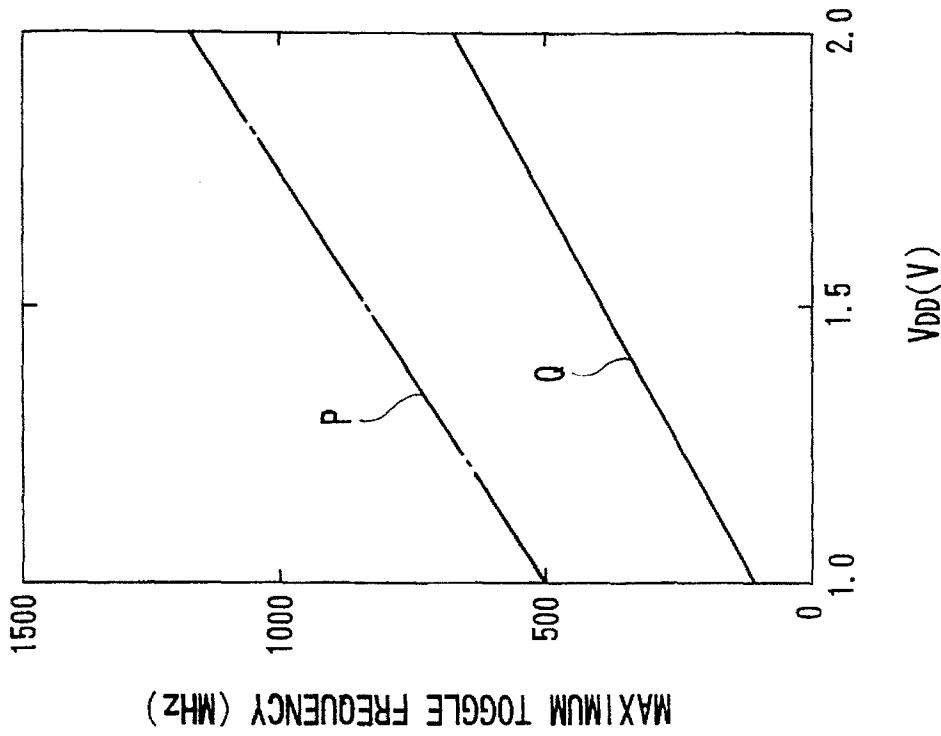**11 Claims, 9 Drawing Sheets**
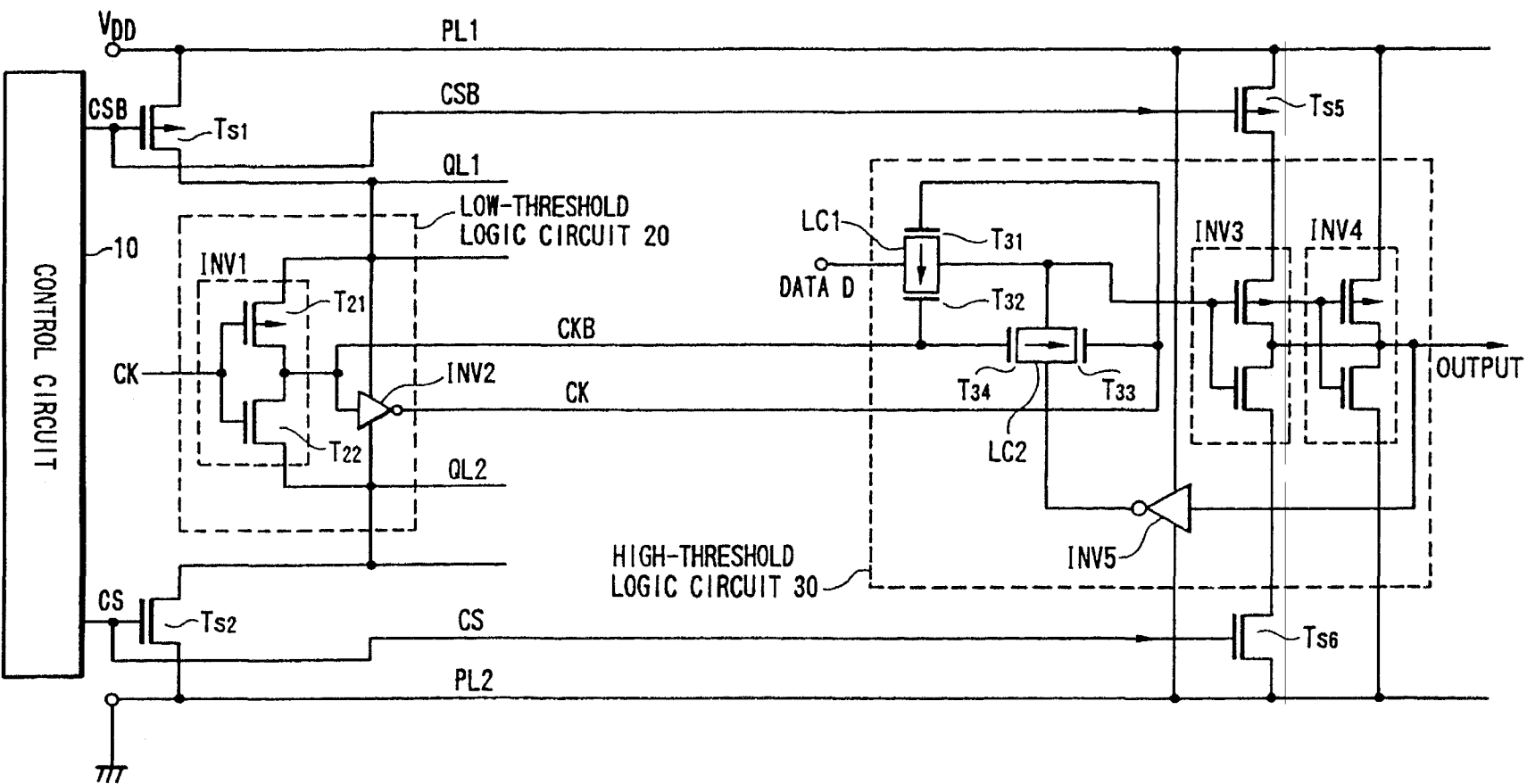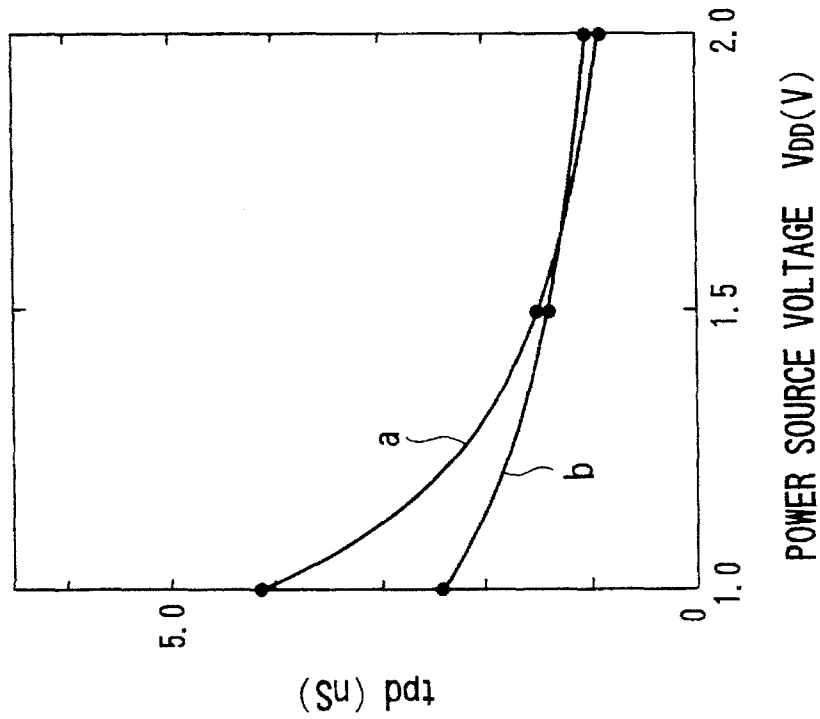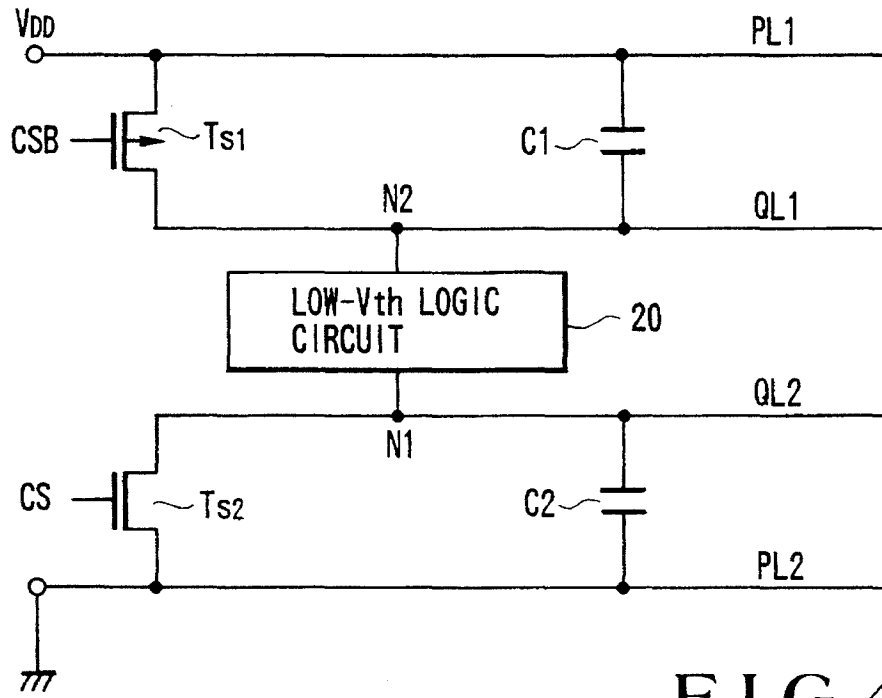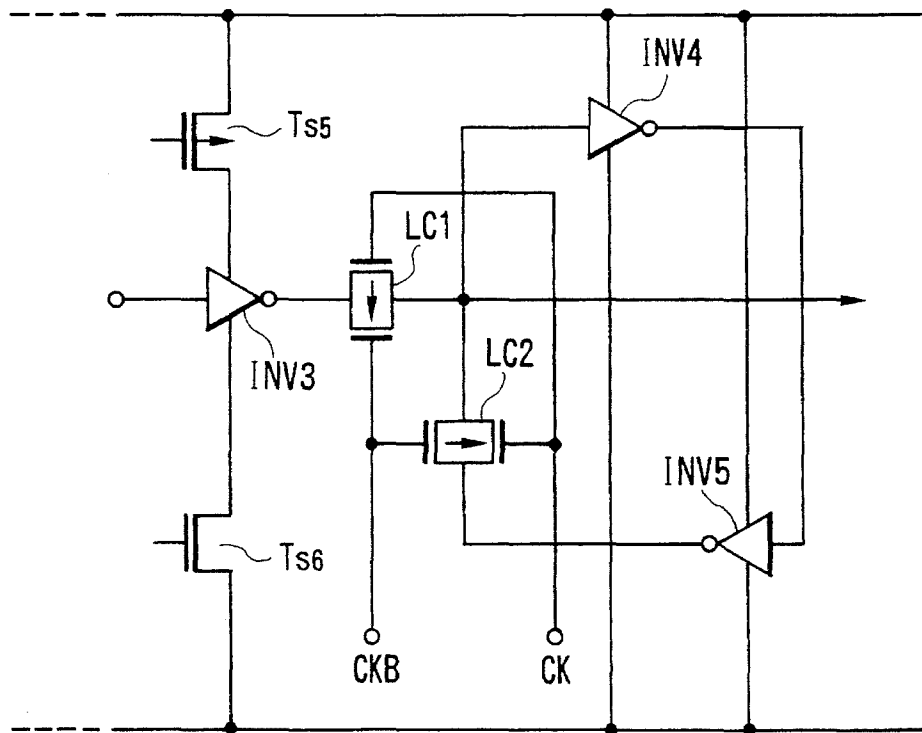
F I G.1

F I G. 3

F I G. 2

F I G. 4

F I G. 5

FIG.6

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