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(54) **SEMICONDUCTOR DEVICE AND DRIVING METHOD THEREOF**

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(57) **ABSTRACT**

A semiconductor device with a small circuit scale is provided. The semiconductor device includes a first circuit and a second circuit. The first circuit includes first to n-th (n is an integer of 2 or more) transistors and the second circuit includes (n+1)-th to 2n-th transistors. The first to n-th transistors are connected in parallel to each other and the (n+1)-th to 2n-th transistors are connected in series to each other. First to n-th signals are supplied to the first circuit and the second circuit. The first circuit has a function of outputting a first potential when each of potentials of the first to n-th signals is lower than or equal to a first reference potential, and outputting a second potential when at least one of the potentials of the first to n-th signals is higher than the first reference potential. The second circuit has a function of outputting a third potential when each of the potentials of the first to n-th signals is higher than a second reference potential, and outputting the first potential when at least one of the potentials of the first to n-th signals is lower than or equal to the second reference potential.