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(54) **SEMICONDUCTOR DEVICES**

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ABSTRACT

A semiconductor device may include first stacks and second stacks, which are alternately disposed on a substrate in a first direction parallel to a top surface of the substrate, and first pads and second pads connecting the first stacks to the second stacks. Each of the first and second stacks may include a gate electrode, channel patterns, which enclose a side surface of the gate electrode and are spaced apart from each other, and first and second conductive lines connected to a corresponding channel pattern. The first and second conductive lines of the second stack may be disposed to be adjacent to the first and second conductive lines, respectively, of the first stack. The first and second pads may be connected to the first and second conductive lines, respectively, of the first and second stacks.

