ABSTRACT

A semiconductor device includes a substrate including an active region extending in a first direction, a gate structure intersecting the active region on the substrate and extending in a second direction, a plurality of channel layers spaced apart from each other in a third direction, perpendicular to an upper surface of the substrate, on the active region and surrounded by the gate structure, and source/drain regions in recess regions of the active region, on opposite sides adjacent to the gate structure and electrically connected to the plurality of channel layers. Each of the plurality of channel layers includes first to third semiconductor layers sequentially stacked in the third direction, the first and third semiconductor layers include silicon (Si), and the second semiconductor layer includes silicon-germanium (SiGe). Side surfaces of the first to third semiconductor layers in the second direction are in contact with the gate structure.

FIG. 2