ABSTRACT

A semiconductor device includes a substrate including an active region extending in a first direction, a gate electrode layer crossing the active region and extending in a second direction, a plurality of channel layers on the active region, spaced apart from each other in a third direction, perpendicular to an upper surface of the substrate, and disposed sequentially from the active region, and surrounded by the gate electrode layer, gate spacer layers disposed on side surfaces of the gate electrode layer in the first direction, and source/drain regions disposed on the active region, on sides of the gate electrode layer, and connected to the plurality of channel layers. An uppermost channel layer among the plurality of channel layers includes channel portions separated from each other in the first direction and disposed below the gate spacer layers.

FIG. 2