

ABSTRACT

A semiconductor device includes a conductive layer; stack structures including gate electrodes stacked in a first direction, and the stack structures stacked in the first direction in a first region and a second region neighboring the first region; a channel structure penetrating the stack structures in the first direction; contact structures including a first portion penetrating the stack structures, and a second portion extending from the first portion to a different length, penetrating a gate electrodes and in contact with a gate electrode, the first portion including one sub-part penetrating one of the stack structures, a width of an upper surface of the sub-part is greater than a width of a lower surface, and the sub-part includes an inclined side surface between an upper surface and a lower surface, and widths of a lower surface of the first portion and an upper surface of the second portion are the same.

FIG. 2A