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(54) **CROSSING MULTI-STACK NANOSHEET STRUCTURE AND METHOD OF MANUFACTURING THE SAME**

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(57) **ABSTRACT**

A semiconductor device includes a substrate; a $1^{st}$ transistor formed above the substrate, and having a $1^{st}$ transistor stack including a plurality of $1^{st}$ channel structures, a $1^{st}$ gate structure surrounding the $1^{st}$ channel structures, and $1^{st}$ and $2^{nd}$ source/drain regions at both ends of the $1^{st}$ transistor stack in a $1^{st}$ channel length direction; and a $2^{nd}$ transistor formed above the $1^{st}$ transistor in a vertical direction, and having a $2^{nd}$ transistor stack including a plurality of $2^{nd}$ channel structures, a $2^{nd}$ gate structure surrounding the $2^{nd}$ channel structures, and $3^{rd}$ and $4^{th}$ source/drain regions at both ends of the $2^{nd}$ transistor stack in a $2^{nd}$ channel length direction, wherein the $3^{rd}$ source/drain region does not vertically overlap the $1^{st}$ source/drain region or the $2^{nd}$ source/drain region, and the $4^{th}$ source/drain region does not vertically overlap the $1^{st}$ source/drain region or the $2^{nd}$ source/drain region.