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(54) **SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF**

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(57) **ABSTRACT**

A semiconductor device includes a substrate, a plurality of epitaxial structures and a plurality of gate structures. The substrate includes a plurality of recesses and a plurality of convex portions. Each of the convex portions is located between the two adjacent recesses. The epitaxial structures are located in the recesses of the substrate respectively. Each of the epitaxial structures includes a first transition layer, a second transition layer and an epitaxial layer. The first transition layer is located on a bottom surface and a sidewall of one of the recesses. The second transition layer is disposed along the first transition layer, in which a material of the second transition layer is different from a material of the first transition layer. The epitaxial layer is located on the second transition layer and fills one of the recesses. The gate structures are located on the convex portions of the substrate respectively.