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(54) **TRANSISTOR AND METHOD FOR MANUFACTURING SAME, SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING SAME**

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(57) **ABSTRACT**

Embodiments provide a transistor and a method for manufacturing same, a semiconductor device and a method for manufacturing same. The method for manufacturing a transistor includes operations. A wafer is provided, the wafer has multiple transistor formation regions, each of which has a transistor pillar with an exposed gate formation surface. A gate oxide layer and a gate are sequentially formed on the gate formation surface of each of the transistor pillars. A source is formed at a first end of each of the transistor pillars. A drain is formed at a second end of each of the transistor pillars, here the first end and the second end are opposite ends of each of the transistor pillars in a first direction which is a thickness direction of the wafer; a part of each of the transistor pillars between the source and the drain forms a channel region of the transistor.