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(54) **LDMOS TRANSISTOR WITH IMPLANT ALIGNMENT SPACERS**

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(57) **ABSTRACT**

A Laterally Diffused Metal Oxide Semiconductor (LDMOS) transistor with implant alignment spacers includes a gate stack comprising a first nitride layer. The first nitride layer is formed on a silicon layer. The gate stack is separated from a substrate by a first oxide layer. The gate stack includes a polysilicon layer formed from the silicon layer, and a second oxide layer is formed on a sidewall of the polysilicon layer. A drain region of the LDMOS transistor is implanted with a first implant aligned to a first edge formed by the second oxide layer. A second nitride layer conformingly covers the second oxide layer. A nitride etch-stop layer conformingly covers the second nitride layer.