

ABSTRACT

Title : **POWER LDMOS TRANSISTOR**

CROSS-REFERENCE TO RELATED APPLICATION

A laterally diffused metal-oxide-semiconductor transistor device includes a substrate having a first conductivity type with a semiconductor layer formed over the substrate. A source region and a drain extension region of the first conductivity type are formed in the semiconductor layer. A body region of a second conductivity type is formed in the semiconductor layer. A conductive gate is formed over a gate dielectric layer that is formed over a channel region. A drain contact electrically connects the drain extension region to the substrate and is laterally spaced from the channel region. The drain contact includes a highly-doped drain contact region formed between the substrate and the drain extension region in the semiconductor layer, wherein a topmost portion of the highly-doped drain contact region is spaced from the upper surface of the semiconductor layer. A source contact electrically connects the source region to the body region.

[Fig 11]