

## SOI-Multi-FinFET: Impact of Fins Number Multiplicity on Corner Effect

**Authors :** A.N. Moulay Khatir, A. Guen-Bouazza, B. Bouazza

**Abstract :** SOI-Multifin-FET shows excellent transistor characteristics, ideal sub-threshold swing, low drain induced barrier lowering (DIBL) without pocket implantation and negligible body bias dependency. In this work, we analyzed this combination by a three-dimensional numerical device simulator to investigate the influence of fins number on corner effect by analyzing its electrical characteristics and potential distribution in the oxide and the silicon in the section perpendicular to the flow of the current for SOI-single-fin FET, three-fin and five-fin, and we provide a comparison with a Trigate SOI Multi-FinFET structure.

**Keywords :** SOI, FinFET, corner effect, dual-gate, tri-gate, Multi-Fin FET

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