

Nano scale body-tied FinFETs have been firstly fabricated. They have fin top width of 30 nm, fin bottom width of 61 nm, fin height of 99 nm, and gate length of 60 nm. This Omega MOSFET shows excellent transistor characteristics, such as very low subthreshold swing, Drain Induced Barrier Lowering (DIBL) of 24 mV/V, almost no body bias effect, and orders of magnitude lower $I_{\text{SUB}}/I_{\text{D}}$ than planar type DRAM cell transistors.