

عنوان مقاله:

Tunnel Field-Effect Transistors: Steeper Switching and Low off Current (IOFF) for Ultra Low Power Applications

محل انتشار:

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خلاصه مقاله:

With down Scaling of MOSFET to nanometer dimensions, the OFF-state leakage current(I_{off}) increases exponentially due to the non scalability of threshold voltage since the Subthreshold Swing(S) is limited to 60mV/decade. Steep Subthreshold Swing transistors based on Band to Band Tunneling (BTBT) are analyzed to improve the performance of the circuit for low power applications. This review paper discuss about various structures and modeling of Tunnel Field Effect Transistor(TFET) which replaces CMOS for greater energy efficiency which is considered to be the most critical design parameter for ubiquitous and mobile computing systems

کلمات کلیدی:

(Band to Band Tunneling (BTBT), Subthreshold Swing(S), Tunnel Field Effect Transistor(TFET)

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