

عنوان مقاله:

Radio Frequency Performance of Hetero Dielectric Heterojunction Double Gate TFETs

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خلاصه مقاله:

In this paper, the radio frequency performance of hetero dielectric heterojunction double gate tunnel field-effect transistor (TFET) is investigated and compared with conventional double gate TFET. The radio frequency parameters include transconductance (g_m), transconductance generation factor (TGF), unit gain cut-off frequency (f_T), maximum oscillation frequency (f_{max}), gain bandwidth product (GBP) and transconductance frequency product (TFP). The Gaussian doping helps in achieving the same by analytically varying the doping profile throughout the specified region. The Gaussian drain doping profile along with hetero dielectric engineering is also responsible for improved radio frequency figure of merits in terms of f_T , GBW, and TFP for high-frequency applications.

کلمات کلیدی:

Radio frequency, Hetero dielectric, Heterojunction, Double gate, TFETs

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