Abstracts

The performance limiting factors as RF MOSFETs scale down

Y.H. Wu, A. Chin, C.S. Liang and C.C. Wu. "The performance limiting factors as RF MOSFETs scale down." 2000 Radio Frequency Integrated Circuits (RFIC) Symposium 00. (2000 [RFIC]): 151-155.

The measured RF performance of 0.5, 0.25, and 0.18 /spl mu/m MOSFETs gradually saturates as scaling down occurs, which can be explained by the derived analytical equation and simulation. The source-drain overlap capacitance, C/sub gd/, and non-quasi-static effect are the main factors but scale much slower than L/sub g/.

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