Abstracts

Schottky junction transistors for micropower RFICs (2002 [RFIC])

J. Spann, Zhiyuan Wu, P. Jaconelli, Jinman Yang and T.J. Thornton. "Schottky junction transistors for micropower RFICs (2002 [RFIC])." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 423-426.

Results are presented from measurements and numerical simulations of Schottky junction transistors, a new type of micropower device capable of operating at GHz frequencies in the sub-threshold regime. Detailed measurements of the DC characteristics of a 2 /spl mu/m gate length device agree well with numerical simulations. Measurements of transconductance and gate capacitance suggest that this relatively long gate length device will have a cut-off frequency of 126 MHz, which is again consistent with the numerical simulations. When projected to gate lengths of 0.1 /spl mu/m, cut-off frequencies in excess of 10 GHz are predicted for drain currents of less than 1 /spl mu/A//spl mu/m.

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