Abstracts

Microwave noise modeling of InP based MODFETs biased for low power consumption

J.M. Miranda, M. Nawaz, P. Sakalas, H. Zirath and J.L. Sebastian. "Microwave noise modeling of InP based MODFETs biased for low power consumption." 2000 Microwave and Guided Wave Letters 10.11 (Nov. 2000 [MGWL]): 469-471.

This paper presents the fabrication, experimental characterization and modeling of 0.15 /spl mu/m gate-length lattice matched MODFETs based on InP technology. The variation of the drain noise temperature of the Pospieszalski model (T/sub D/) with the applied bias has been investigated under very low power consumption conditions, and a noticeably complex dependence of this factor on the drain current has been observed. In fact, T/sub D/ can decrease with increasing drain currents, and suffers a strong increase as a function of the drain voltage even at very low values of the drain current. However, all of these effects can be qualitatively explained from physical considerations.

❑ Return to main document.