Abstracts

Noise parameters of InP-based double heterojunction base-collector self-aligned bipolar transistors

V. Danelon, F. Aniel, J.L. Benchimol, J. Mba, M. Riet, P. Crozat, G. Vernet and R. Adde. "Noise parameters of InP-based double heterojunction base-collector self-aligned bipolar transistors." 1999 Microwave and Guided Wave Letters 9.5 (May 1999 [MGWL]): 195-197.

The noise performances of a new base-collector self-aligned technology of double-heterojunction single-finger InGaAs-InP bipolar transistor are investigated at 300 K. Noise parameter variations are studied versus frequency in the 2-18 GHz range, versus collector current and emitter area. A low minimum noise figure F/sub min/=0.6 dB is demonstrated at 2 GHz with a 4.8-/spl mu/m/sup 2/ emitter. Variations of F/sub min/ show a minimum versus collector current. The high cutoff frequencies of the devices limit the increase of F/sub min/ versus frequency.

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