

An Improved Noise Model of InP HEMT for Millimeter Wave Application

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Abstract

A new temperature noise model, including the influence of gate-drain series resistance R_{gd} on the noise performance for an InP HEMT, is presented in this paper. An equivalent temperature T_{gd} of R_{gd} has been taken into account based on pospieszalski's noise model. The corresponding extraction procedure of noise parameters is given. Good correlation between the simulated and measured noise parameters in the frequency range of 8GHz~50GHz for a wide range of bias points verify the validity of the improved noise model.

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