Abstracts

Large Signal Model for Analysis and Design of HEMT Gate Mixer

R. Allam, C. Kolanowski, D. Theron and Y. Crosnier. "Large Signal Model for Analysis and Design of HEMT Gate Mixer." 1994 Microwave and Guided Wave Letters 4.12 (Dec. 1994 [MGWL]): 405-407.

This paper examines the problem of modeling HEMT's for calculations of conversion gain and intermodulation. An accurate and simple large signal model of discrete HEMT's has been developed. The nonlinear elements of the model are assumed to depend exclusively on the gate-source voltage. The interpolation of the measured data, using polynomial expressions, provides a description of the HEMT's nonlinearities in a CAD software. Based on the model, a hybrid HEMT gate mixer has been built. The accuracy of the model has been verified, and we obtained good agreement between the measured and simulated results.

❑ Return to main document.