Abstracts

Direct extraction of FET noise models from noise figure measurements

M. Rudolph, R. Doerner, P. Heymann, L. Klapproth and G. Bock. "Direct extraction of FET noise models from noise figure measurements." 2002 Transactions on Microwave Theory and Techniques 50.2 (Feb. 2002 [T-MTT]): 461-464.

An algorithm is presented that allows for noniterative extraction of the parameters of the Pucel and Pospieszalski FET noise models directly from noise-figure measurements. Since the goal is to minimize the number of source-pull measurements, the number of different source admittances required as a minimum to determine the model parameters reliably is investigated. It turns out that, in the case of the Pospieszalski model, 50-/spl Omega/ measurements are sufficient, while in case of the Pucel model, three additional source impedances have to be taken into account. The results are verified by investigating MESFET and pseudomorphic high electron-mobility transistor devices.

❑ Return to main document.