Abstracts

Transistor parameter extraction using DC, S-parameter and noise data simultaneously

Q. Cai, J. Gerber, T. Daniel and U.L. Rohde. "Transistor parameter extraction using DC, S-parameter and noise data simultaneously." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 861-864.

This paper presents, for the first time, an integrated method for transistor model parameter extraction by fitting the DC, multi-bias S-parameter and noise measurements simultaneously. The extracted model provides accurate small-signal, large-signal and noise characteristics. This technique is demonstrated for a Raytheon foundry HBT and excellent results are obtained. Self-heating effects are taken into consideration in the parameter extraction procedure.

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