Abstracts

Consistent Small-Signal and Large-Signal Extraction Techniques for Heterojunction FET's

P. Jansen, D. Schreurs, W. De Raedt, B. Nauwelaers and M. Van Rossum. "Consistent Small-Signal and Large-Signal Extraction Techniques for Heterojunction FET's." 1995 Transactions on Microwave Theory and Techniques 43.1 (Jan. 1995 [T-MTT]): 87-93.

A new method is reported to extract large-signal current and charge sources from the small-signal S-parameters of pseudomorphic heterojunction field effect transistors (PHFET's). This method produces a new intrinsic small-signal equivalent circuit topology with less constraints concerning the extraction of the large-signal current and charge sources. The main advantage of this new topology is charge conservation. The S-parameter measurements of a 0.2-µm PHFET agrees well with the small-signal S-parameter data, obtained after evaluation of the new large-signal model at different bias points.

❑ Return to main document.