Abstracts

Math methods in transistor modeling: Condition numbers for parameter extraction

F.D. King, P. Winson, A.D. Snider, L. Dunleavy and D.P. Levinson. "Math methods in transistor modeling: Condition numbers for parameter extraction." 1998 Transactions on Microwave Theory and Techniques 46.9 (Sep. 1998 [T-MTT]): 1313-1314.

Condition numbers expressing the sensitivity of computed circuit element values to inaccuracies in S-parameter measurements are derived and evaluated for a standard small-signal MESFET model. The condition numbers shed light on the common difficulty experienced by transistor modelers in extracting accurate values for the input resistance. Other elements are also classified according to their sensitivity.

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