

## Broad-Band Determination of the FET Small-Signal Equivalent Circuit

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*M. Berroth and R. Bosch. "Broad-Band Determination of the FET Small-Signal Equivalent Circuit." 1990 Transactions on Microwave Theory and Techniques 38.7 (Jul. 1990 [T-MTT]): 891-895.*

An improved method to determine the broad-band small-signal equivalent circuit of field effect transistors (FET's) is proposed. This method is based on an analytic solution of the equations for the Y parameters of the intrinsic device and allows direct determination of the circuit elements at any specific frequency or averaged over a frequency range. The validity of the equivalent circuit can be verified by showing the frequency independence of each element. The method can be used for the whole range of measurement frequencies and can even be applied to devices exhibiting severe low-frequency effects.

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