# Abstracts

## Large-Signal Equivalent-Circuit Model of a GaAs Dual-Gate MESFET Mixer (Short Papers)

*R.E. Miles and M.J. Howes. "Large-Signal Equivalent-Circuit Model of a GaAs Dual-Gate MESFET Mixer (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.5 (May 1985 [T-MTT]): 433-436.*

A large-signal equivalent-circuit model of a GaAs MESFET mixer containing twelve elements, of which eight are voltage-dependent, is solved in the time domain for local oscillator and frequencies of 9.5 GHz and 10.0 GHz, respectively. The results variation of conversion gain with local oscillator and signal power and are in good agreement with measured values. The model is formulated in such a way that material/device/circuit interactions can be yielding information on the preferred device structures and biasing conditions.

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