# Abstracts

## Large-Signal Time-Domain Simulation of HEMT Mixers (Short Papers)

*G.-W. Wang, I. Ichitsubo, W.H. Ku, Y.-K. Chen and L.F. Eastman. "Large-Signal Time-Domain Simulation of HEMT Mixers (Short Papers)." 1988 Transactions on Microwave Theory and Techniques 36.4 (Apr. 1988 [T-MTT]): 756-759.*

A large-signal HEMT model and a time-domain nonlinear circuit analysis program have been developed. In this work a systematic method to simulate HEMT mixers and design them for maximum conversion gain is presented. The transconductance-compression effect reduces the mixer's conversion gain at high frequencies. Simulation results from mixers designed to operate at 10, 20, and 40 GHz show that a reduction in parasitic conduction in the AIGaAs layer significantly increases the conversion gain.

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