

## Prediction of Wideband Power Performance of MESFET Devices Using the Volterra Series Representation

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*C.L. Law and C.S. Aitchison. "Prediction of Wideband Power Performance of MESFET Devices Using the Volterra Series Representation." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 487-489.*

Power performance of a medium power GaAs MESFET is predicted over the frequency range from 2GHz to 16GHz using a non-linear model where the non-linearities represented by power series up to the third order are derived from D.C. and low-frequency measurements. The analysis employs the Volterra series representation up to the third order. Experimental verification is made on a NE9000 medium power MESFET device. The agreement between predicted and measured output power at one dB. gain compression is within  $\pm 0.5\text{dB}$  across the 2-16GHz band.

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