

## RF Characterization of Microwave Power FET's

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*R.S. Tucker. "RF Characterization of Microwave Power FET's." 1981 Transactions on Microwave Theory and Techniques 29.8 (Aug. 1981 [T-MTT]): 776-781.*

The large-signal S-parameter  $S_{22}$  and the optimum load for maximum output power are two parameters commonly used in the RF characterization of microwave power FET's. Using a nonlinear circuit model of the device, the dependence on RF power of each of these parameters is investigated. A method is given for computing the optimum load from the large-signal  $S_{22}$ . Equivalent load-pull data can thus be obtained without the need for load-pull measurements. The gain compression characteristics of the transistor for arbitrary load can be computed from large-signal  $S_{21}$ , and  $S_{22}$  data.

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