Abstracts

Computer-Aided Design of Class-C Microwave Transistor Amplifiers by Direct Numerical Optimization

V. Rizzoli, C. Cecchetti and A. Costanzo. "Computer-Aided Design of Class-C Microwave Transistor Amplifiers by Direct Numerical Optimization." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 585-588.

In this paper we outline a straightforward procedure for microwave class-C amplifier design. We first discuss an empirical bipolar junction transistor model of an enhanced Ebers-Moll type, allowing an accurate simulation of the device performance in the power saturation region. We then describe the use of this model in conjunction with a general-purpose harmonic-balance simulator, to provide a direct numerical optimization capability for the class-C amplifier. Finally, as an illustrative example, we report on the simulation of a practical MIC amplifier built on teflon-fiberglass substrate.

❑ Return to main document.