Abstracts

Computer-Aided Design of Monolithic MESFET Distributed Amplifiers

M.-K. Vai and S. Prasad. "Computer-Aided Design of Monolithic MESFET Distributed Amplifiers." 1990 Transactions on Microwave Theory and Techniques 38.4 (Apr. 1990 [T-MTT]): 345-349.

A computerized optimization method called simulated annealing is applied to the design of monolithic distributed amplifiers. The element values in the small-signal equivalent circuit model of the MESFET's, the characteristics of the gate and drain transmission lines, and the number of stages are generated to match a specified frequency response by this computer-aided design (CAD) process. The success of this process lies in the fact that it is fully automatic and the only input needed is the desired flat band gain and the 3 dB point. The method itself is sufficiently general that it can be applied to a variety of design problems. Excellent agreement is shown when the distributed amplifier designed is simulated using Touchstone, a popular microwave simulation program.

❑ Return to main document.