Abstracts

Computer-Aided Analysis of Microwave Circuits

V.A. Monaco and P. Tiberio. "Computer-Aided Analysis of Microwave Circuits." 1974 Transactions on Microwave Theory and Techniques 22.3 (Mar. 1974 [T-MTT] (Special Issue on Computer-Oriented Microwave Practices)): 249-263.

The most relevant techniques that have either found or should find useful application in analyzing microwave circuit performances in the frequency domain are surveyed. The particular needs of the microwave engineer are briefly discussed. Circuit equation formulations in terms of voltages and currents and wave variables are presented and the solution of the set of circuit equations by sparse-matrix techniques is illustrated. Methods based on multiport connection are also reviewed. The techniques for computing the first- and second-order sensitivity are illustrated and a comparison is made between the direct method and the transpose-matrix method, which is in certain cases similar to the method based on the adjoint circuit.

❑ Return to main document.