Abstracts

Computer-Aided Synthesis of Planar Circuits

F. Kato, M. Saito and T. Okoshi. "Computer-Aided Synthesis of Planar Circuits." 1977 Transactions on Microwave Theory and Techniques 25.10 (Oct. 1977 [T-MTT]): 814-819.

This paper presents a fully computer-oriented iterative synthesis of an open-boundary planar circuit having an impedance matrix with prescribed poles and residues. A starting circuit pattern is given first, and it is represented by a finite number of parameters. Those parameters (and hence, the pattern) are then iteratively modified by using the Newton-Raphson method to realize the prescribed circuit characteristics. When the numbers of given poles and coupling ports are relatively small, the results are satisfactory both in the computing time and accuracy. Some numerical examples are given.

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