Abstracts

A new iterative diakoptics-based multilevel moments method for planar circuits

S. Ooms and D. De Zutter. "A new iterative diakoptics-based multilevel moments method for planar circuits." 1998 Transactions on Microwave Theory and Techniques 46.3 (Mar. 1998 [T-MTT]): 280-291.

This paper combines a multilevel moments method (MMM) scheme with a modified diakoptics (MD) technique and a block Gauss-Seidel (BGS) iterative technique to reduce the solution time of large planar microwave structures. The proposed MMM scheme has two levels. On the lower level, the planar circuit is divided into several subcircuits using two types of artificial ports. At the higher level, general basis functions defined over the complete circuit are generated in an iterative way. The validity and the efficiency of the new technique are validated by several examples, including a large low-pass filter.

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