Abstracts

Extraction of network parameters in the electromagnetic analysis of planar structures using the method of moments

M.N. Abdulla and M.B. Steer. "Extraction of network parameters in the electromagnetic analysis of planar structures using the method of moments." 2001 Transactions on Microwave Theory and Techniques 49.1 (Jan. 2001 [T-MTT] (Mini-Special Issue on 2000 Radio-Frequency Integrated Circuits (RFIC) Conference and Automatic Radio Frequency Techniques Group (ARFTG) Meeting)): 94-103.

Integration of electromagnetic (EM) and circuit analyses for the modeling of spatially distributed microwave and millimeter-wave circuits requires the establishment of ports that are defined in both the circuit and EM realms. Four EM techniques are developed here and contrasted for the extraction of the port network parameters at circuit compatible ports. A full-wave method of-moments EM analysis directly yielding network parameters of a slot-stripline-slot structure is formulated.

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