Abstracts

Multiport analysis of arbitrary circular-rod insets in rectangular waveguide by the generalized admittance matrix (Aug. 2001 [T-MTT]

G.G. Centili. "Multiport analysis of arbitrary circular-rod insets in rectangular waveguide by the generalized admittance matrix." 2001 Transactions on Microwave Theory and Techniques 49.8 (Aug. 2001 [T-MTT] (Mini-Special Issue on the 2000 IEEE Radio and Wireless Conference (RAWCON))): 1438-1442.

An original generalized-admittance-matrix (GAM) approach for the analysis of multiport junctions in rectangular waveguide having an arbitrary circular-rod inset is presented in this paper. The method is based on an efficient computation of the GAM for the blocks that compose the structure. The efficiency is due to the fact that, for each block, the full three-dimensional GAM is obtained by solving a set of uncoupled two-dimensional problems. The accuracy and efficiency of the method developed have been assessed by comparing the results obtained with some measured data and with data obtained by the finite-element method.

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