Abstracts

Wideband Modeling of Arbitrarily Shaped H-Plane Waveguide Components by the "Boundary Integral-Resonant Mode Expansion Method"

G. Conciauro, P. Arcioni, M. Bressan and L. Perregrini. "Wideband Modeling of Arbitrarily Shaped H-Plane Waveguide Components by the "Boundary Integral-Resonant Mode Expansion Method"." 1996 Transactions on Microwave Theory and Techniques 44.7 (Jul. 1996, Part I [T-MTT]): 1057-1066.

The paper describes a very fast and flexible algorithm for the wideband modeling of arbitrarily shaped H-plane waveguide components. The algorithm is based on the evaluation of the poles and the residues of the Y-parameters by the "boundary integral--resonant mode expansion method." It also permits the fast evaluation of the effect of a deformation on the frequency response, a feature very useful either for optimization or for setting the mechanical tolerances. Some examples demonstrate the efficiency, flexibility, and reliability of the method. They show that the frequency response of complicated structures, such as multicavity filters, can be calculated in times of the order of one minute (or less) on ordinary workstations.

❑ Return to main document.