Abstracts

Full-Wave Modal Analysis of Arbitrarily-Shaped Dielectric Waveguides through an Efficient Boundary-Element-Method Formulation (1995 Vol. II [MWSYM])

C. Di Nallo, F. Frezza and A. Galli. "Full-Wave Modal Analysis of Arbitrarily-Shaped Dielectric Waveguides through an Efficient Boundary-Element-Method Formulation (1995 Vol. II [MWSYM])." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 479-482.

In this work an original procedure, based on the boundary element method (BEM), is carried out for the full-wave modal analysis of dielectric waveguiding structures with arbitrary cross section. A new advantageous integral-equation formulation is reached after a careful analysis of the dyadic kernel's discontinuities. Numerical solutions are then derived by means of both conventional and novel algorithms. Various results for important microwave applications, compared to data from other numerical approaches and from measurements, emphasize the notable accuracy and efficiency of such implementation.

❑ Return to main document.