Abstracts

Computation of Complex Resonance Frequencies of Isolated Composite Objects

W. Zheng. "Computation of Complex Resonance Frequencies of Isolated Composite Objects." 1989 Transactions on Microwave Theory and Techniques 37.6 (Jun. 1989, Part I [T-MTT]): 953-961.

A technique based on the null-field method is developed to investigate the resonance frequencies and the quality factors of isolated composite dielectric/ferrite resonators. A method of identifying the resonant modes is suggested for nonspherical resonators by analyzing the peaks of their scattering cross sections in the resonance frequency range. Computed resonance frequencies and Q factors for composite resonators, such as double disks and tubular resonators with ferrite core, are compared with published calculations and experiments whenever possible. These comparisons show that the present technique is an effective and flexible one for investigating composite resonators with relatively complicated geometries.

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