Abstracts

The method of lines for the hybrid analysis of multilayered cylindrical resonator structures

D. Kremer and R. Pregla. "The method of lines for the hybrid analysis of multilayered cylindrical resonator structures." 1997 Transactions on Microwave Theory and Techniques 45.12 (Dec. 1997, Part I [T-MTT]): 2152-2155.

A very powerful numerical model based on the method of lines (MoL) is developed for the hybrid analysis of composite multilayered cylindrical dielectric resonator structures. These structures are composed of a number of coaxial rings which are arbitrarily layered in the axial direction, the resonant frequencies, as well as quality factors caused by radiation or dielectric loss and the corresponding field distributions of all resonant modes can be determined with the described algorithm. The theory is verified in case of the conical dielectric resonator and a comparison of our numerical results with those of other authors shows excellent consistency.

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