Abstracts

Finite Elements for Microwave Device Simulation: Application to Microwave Dielectric Resonator Filters

J.-P. Cousty, S. Verdeyme, M. Aubourg and P. Guillon. "Finite Elements for Microwave Device Simulation: Application to Microwave Dielectric Resonator Filters." 1992 Transactions on Microwave Theory and Techniques 40.5 (May 1992 [T-MTT]): 925-932.

The two dimensional (2-D) and three dimensional (3-D) finite element method (FEM) are applied to compute the exact scattering parameters (taking into account the transmission lines) of dielectric resonator (DR's) filters. These filters are acting both on TM or hybrid modes. A sensitivity analysis is also performed to predict the influence of the geometrical parameters on the devices responses. Examples of one, two and three DR filters are given. Experimental results are in good agreement with theoretical ones.

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