Abstracts

Automated electromagnetic optimization method for microwave devices

S. Bila, D. Baillargeat, S. Verdeyme and P. Guillon. "Automated electromagnetic optimization method for microwave devices." 1997 Microwave and Guided Wave Letters 7.8 (Aug. 1997 [MGWL]): 242-244.

We present a relevant automated electromagnetic (EM) optimization method which combines a fast analytical model deducted from a rigorous and accurate EM analysis and the global analysis of the device performed with a finite element method (FEM). We apply the automated method to the optimization of a volumic dielectric resonator filter. First, we present the definition of the analytical coarse model, then we use this model as a starting point for the EM optimization of structure dimensions. The accuracy of this automated method is then demonstrated, considering the good agreement between theoretical optimization results and experimental ones.

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