Abstracts

Analysis and design of periodic structures for microstrip lines by using the coupled mode theory

T. Lopetegi, M.A.G. Laso, M.J. Erro, M. Sorolla and M. Thumm. "Analysis and design of periodic structures for microstrip lines by using the coupled mode theory." 2002 Microwave and Wireless Components Letters 12.11 (Nov. 2002 [MWCL]): 441-443.

In this work, the coupled mode theory is formulated to analyze distributed periodic structures for microstrip lines. After it, several reasonable approximations are introduced giving rise to analytical solutions for the problem. The obtained results, both numerical and analytical, are checked against measurements showing very good agreement. The proposed method is very attractive for the study of these devices since it avoids the time-consuming full-wave electromagnetic simulations customarily employed and provides analytical solutions that are very useful for analysis and synthesis purposes.

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