Abstracts

Electromagnetic modeling of multi-layer microwave circuits by the longitudinal decomposition approach

A. Kirilenko, D. Kulik, L. Rud, V. Tkachenko and P. Pramanick. "Electromagnetic modeling of multi-layer microwave circuits by the longitudinal decomposition approach." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1257-1260 vol.2.

A system approach based on the transverse-resonance technique and well-equipped modeling system is used to calculate the eigen-mode spectrum of multiconductor lines with piece-wise continuous coordinate boundaries of their cross-section. The exact models of the multi-layer circuits are built with the mode-matching and generalized S-matrix techniques. Viability of the created program tools is demonstrated with the examples of a multi-turn loop inductor and a third-order low-pass filter.

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