Abstracts

ANN and EM based models for fast and accurate modeling of excitation loops in combline-type filters

A. Borji, D. Busuioc, S. Safavi-Naeini and S.K. Chaudhuri. "ANN and EM based models for fast and accurate modeling of excitation loops in combline-type filters." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 2105-2108 vol.3.

A fast hybrid model for accurate modeling of excitation loops and taps in a class of coupled coaxial cavity filters is presented. The model consists of a lumped element equivalent circuit and a set of fast parametric models including an EM based model for mutual coupling and a neuromodel for parasitic inductance and capacitance of the coupling device. This model provides an ideal tool in synthesis and optimization of combline-type filters and diplexers to minimize the return loss and reduce the cost of post fabrication tunings.

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