Abstracts

Modelling Structure Parasitic in Comb-Line Filters

I. Shapir and V. Sharir. "Modelling Structure Parasitic in Comb-Line Filters." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 477-480.

Combline filters frequently show wider bandwidth then initially synthesized and analyzed. The main cause, as presented in the paper, is distortion of the TEM electromagnetic fields at the resonators open ends. These distortions depend on the three dimensional structure of this region, requiring heavy computation for 3-D field analysis. A modification to the classic equivalent network of combline filters, which represents this effect is described and formulas to calculate its elements are given, which enables good approximation of the filter's actual performance by using inexpensive network analysis tools.

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