Abstracts

Hybrid circuit-full-wave computer-aided design of a manifold multiplexers without tuning elements

L. Accatino and M. Mongiardo. "Hybrid circuit-full-wave computer-aided design of a manifold multiplexers without tuning elements." 2002 Transactions on Microwave Theory and Techniques 50.9 (Sep. 2002 [T-MTT]): 2044-2047.

A hybrid procedure is introduced for computer-aided design (CAD) of manifold multiplexers without tuning elements. The procedure is based on: (1) a standard initial design with a simple network prototype; (2) a hybrid optimization with the multiplexer manifold rigorously described by a full-wave model and filters still described in terms of their network prototype; and (3) a final full-wave optimization of the entire structure. The proposed approach drastically reduces computer time while making it feasible to perform a very accurate full-wave optimization which in turn allows the avoidance of using tuning elements. An example illustrates and validates the CAD procedure.

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