Abstracts

Efficient CAD of Wideband Contiguous Channel Multiplexers

A. Morini, T. Rozzi and M. Mongiardo. "Efficient CAD of Wideband Contiguous Channel Multiplexers." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1651-1654.

A systematic procedure for the efficient CAD of multiplexers is presented and applied to the design of wideband contiguous channel multiplexers using manifolds consisting of interconnected Y-junctions. The procedure starts by connecting N separately designed filters to the manifold at appropriate distances. All parameters are then optimized by computing the multiplexers sensitivities by the Adjoint Network Method (ANM). The latter is specialized to account for the multiplexer topology. Moreover the ANM is applied to the optimization of both the prototype and the final component. The proposed algorithm takes advantage of the efficiency of the ANM, while also reducing code complexity and memory resources. Keywords: Microwave multiplexer, Adjoint network method, Y-junction manifold.

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