

Abstracts

A Fullwave CAD Tool of Waveguide Components Using a High Speed Direct Optimizer

F. Alessandri, M. Dionigi, R. Sorrentino and M. Mongiardo. "A Fullwave CAD Tool of Waveguide Components Using a High Speed Direct Optimizer." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1539-1542.

Based on the adjoint network method (ANM) and on mode matching technique, an extremely efficient optimization tool has been developed for the CAD of a class of rectangular waveguide components. This includes filters, phase shifters, branch guide couplers, etc., with step in either the E- or H-plane. With respect to the conventional finite difference computation of the derivatives, a speedup factor of more than 10 times is easily achieved.

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