

Inverse scattering of nonuniform, symmetrical coupled lines

Tun-Ruey Cheng, Te-Wen Pan and Ching-Wen Hsue. "Inverse scattering of nonuniform, symmetrical coupled lines." 1998 Microwave and Guided Wave Letters 8.7 (Jul. 1998 [MGWL]): 260-262.

A novel technique is developed to reconstruct the physical layouts of nonuniform symmetric couplers from the scattering parameters at terminals. The coupler is decomposed into even- and odd-mode lines in which the decoupled modal lines are reconstructed from their respective scattering parameters. The effect of unequal modal propagation delays on the reconstructed coupler is also addressed. Numerical results are presented to illustrate the validity of this reconstruction technique.

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