

Abstracts

A CAD Procedure for the Double-Layer Broadside-Coupled Marchand Balun

R. Schwindt and C. Nguyen. "A CAD Procedure for the Double-Layer Broadside-Coupled Marchand Balun." 1994 MTT-S International Microwave Symposium Digest 94.1 (1994 Vol. 1 [MWSYM]): 389-391.

New design equations and a new computer-aided design (CAD) procedure for the double-layer Marchand balun, constructed of broadside-coupled microstrip lines, are presented, based on the derived scattering parameters and a circuit synthesis technique. The developed procedure can determine accurately and quickly both initial electrical and physical parameters of the balun for achieving a desired performance, as well as provide an accurate and simple analysis. Calculated results for a GaAs MMIC balun designed by this procedure are compared to a general full-wave analysis, and good performance and agreement are obtained.

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