Abstracts

Novel quadrature branch-line coupler using CPW-to-microstrip transitions

Joong-Ho Lee and Hai-Young Lee. "Novel quadrature branch-line coupler using CPW-to-microstrip transitions." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 621-624.

This paper presents a new double-sided 3-dB branch-line coupler using CPW-to-microstrip via-hole transitions for multi-layers circuits. The coupler is designed using the even-odd mode method, and the circuit performance is calculated by the Finite Difference Time Domain (FDTD) method. The fabricated double-sided 3-dB branch-line coupler has /spl plusmn/0.5 dB maximum power imbalance and /spl plusmn/1/spl deg/ phase imbalance, 15 dB minimum isolation and 15 dB minimum return loss over a 24% bandwidth centered at 2 GHz. The high performance and the manufacturing compatibility can be effectively used for multi-layers circuits.

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