Abstracts

Transient Coupling Reduction and Design Considerations in Edge-Coupled Coplanar Waveguide Couplers (Short Papers)

M.R. Lyons and C.A. Balanis. "Transient Coupling Reduction and Design Considerations in Edge-Coupled Coplanar Waveguide Couplers (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.5 (May 1996 [T-MTT]): 778-783.

Edge-coupled coplanar waveguide (CPW) forward directional couplers are studied using an even/odd mode analysis. Specific height combinations of multilayer substrates are found which equalize the phase velocities of the even and odd modes. These modal velocity equalization points are seen to be relatively constant over a wide band of frequencies. Results of simulated pulse distortion are presented in a multilayer compensated structure showing a dramatic reduction in transient signal coupling and overall distortion. Design considerations for practical circuit designs are also discussed.

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