Abstracts

Dispersion Characteristics of the Broadside-Coupled Coplanar Waveguide

C. Nguyen. "Dispersion Characteristics of the Broadside-Coupled Coplanar Waveguide." 1993 Transactions on Microwave Theory and Techniques 41.8 (Sep. 1993 [T-MTT] (Special Issue on Modeling and Design of Coplanar Monolithic Microwave and Millimeter-Wave Integrated Circuits)): 1630-1633.

The dispersive properties for the even- and odd-modes of the broadside-coupled coplanar waveguide (CPW) are determined using the spectral domain method. Various numerical results of the even- and odd-mode effective dielectric constants as a function of frequency are presented and discussed. It is found that the structure has a very weak dispersion. This fact is further confirmed through a comparison between the calculated dynamic and quasi-static results of the even- and odd-mode effective dielectric constants. The low dispersion feature signifies the fact that the quasi-static analysis is adequate for designing practical microwave and millimeter-wave circuits employing broadside-coupled CPW.

❑ Return to main document.