Abstracts

Development of finite ground coplanar (FGC) waveguide 90 degree crossover junctions with low coupling

G.E. Ponchak and E. Tentzeris. "Development of finite ground coplanar (FGC) waveguide 90 degree crossover junctions with low coupling." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1891-1894.

Microwave and millimeter-wave integrated circuits and distribution networks often require two transmission lines to cross over each other. In this paper, experimental measurements and 3D-Finite Difference Time Domain (FDTD) analysis are used to characterize Coplanar Waveguide (CPW) and Finite Ground Coplanar (FGC) waveguide crossover junctions for the first time. It is shown that FGC crossover junctions have approximately 15 dB lower coupling than CPW crossover junctions with no degradation in return and insertion loss.

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