Abstracts

Enhanced Spectral Domain Analysis of Coupled Slotlines with Septum and Pedestal Considering Finite Thickness of Conductors for Wideband MICs

T. Wang and K. Wu. "Enhanced Spectral Domain Analysis of Coupled Slotlines with Septum and Pedestal Considering Finite Thickness of Conductors for Wideband MICs." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 1037-1040.

A class of coupled slotline structures with septum and pedestal/groove considering finite thickness of conductors are analyzed for wideband applications of microwave and millimeter wave integrated circuits. The analysis is based on a novel enhanced spectral-domain approach (SDA). Numerical results are presented for propagation constants and characteristic impedances of the fundamental modes. Effects of different structural parameters on cut-off frequencies of first higher-order even- and odd-modes are discussed in detail. The inherent mechanism of these cutoff frequencies of first higher-order modes indicates that the monomode bandwidth can be extended by appropriately choosing the dimension of pedestal in coupled slotlines (CSLs).

❑ Return to main document.