Abstracts

Full-Wave Analysis of Aperture-Coupled Microstrip Lines

N. Herscovici and D.M. Pozar. "Full-Wave Analysis of Aperture-Coupled Microstrip Lines." 1991 Transactions on Microwave Theory and Techniques 39.7 (Jul. 1991 [T-MTT]): 1108-1114.

Two methods are presented for the analysis of aperture-coupled microstrip lines. Assuming a quasi-TEM traveling wave incident on the feeding line, an expression for the wave on the coupled line is derived. First, the moment method is used and the current on the coupled line is represented by a traveling wave propagating away from the slot. In the second method, the reciprocity theorem is applied to the coupled line. An equivalent circuit is derived and the S parameters are computed. Theoretical results are verified with measurements.

❑ Return to main document.