Abstracts

Frequency-Independent Equivalent Circuit Model for Microstrip Open-End and Gap Discontinuities (Short Papers)

N.G. Alexopoulos and S.-C. Wu. "Frequency-Independent Equivalent Circuit Model for Microstrip Open-End and Gap Discontinuities (Short Papers)." 1994 Transactions on Microwave Theory and Techniques 42.7 (Jul. 1994, Part I [T-MTT]): 1268-1272.

The development of user friendly software for microwave integrated circuits will become possible with the adoption of lumped equivalent circuits for interconnect discontinuities. Frequency independent equivalent lumped circuit models are proposed in this paper, wherein resistors are introduced to account for radiation and surface wave losses at microstrip discontinuities. Simple algebraic expressions are obtained for the elements of lumped equivalent circuits for the microstrip open-end and gap discontinuities. These expressions are highly accurate as they are obtained from the full-wave solution in conjunction with physical interpretation and curve fitting techniques. These equivalent circuits include resistor, inductor, and capacitor elements.

❑ Return to main document.