

Abstracts

Spectral-Domain Analysis of Complex Characteristic Impedance of a Leaky Conductor-Backed Slotline

N.K. Das. "Spectral-Domain Analysis of Complex Characteristic Impedance of a Leaky Conductor-Backed Slotline." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1791-1794.

We define an "equivalent complex characteristic impedance" for a conductor-backed slotline, that can be useful for circuit modeling purposes. Standard methods for computing the characteristic impedance of non-leaky transmission lines would not apply to a conductor-backed slotline due to its non-standard leakage behavior. Two alternate methods are proposed, that are compared with each other, as well as validated by comparing with rigorous 3D simulations of a practical circuit geometry.

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