Abstracts

Discontinuities in Finlines on Semiconductor Substrate (Dec. 1986 [T-MTT])

K. Uhde. "Discontinuities in Finlines on Semiconductor Substrate (Dec. 1986 [T-MTT])." 1986 Transactions on Microwave Theory and Techniques 34.12 (Dec. 1986 [T-MTT] (1986 Symposium Issue)): 1499-1507.

Using the singular integral equation (SIE) technique, two finline structures on an insulator-semiconductor substrate are analyzed. The complex propagation constants of the dominant and the first three higher order modes are presented depending on the conductivity of the semiconductor layer. Then, discontinuities in both slot width and substrate complex dielectric constant are investigated theoretically. The reflection and the transmission coefficients of the dominant mode are calculated showing that a step in the permittivity can almost be compensated for by a step in the slot width.

❑ Return to main document.