# Abstracts

## Microstrip directional couplers with ideal performance via single-element compensation

*M. Dydyk. "Microstrip directional couplers with ideal performance via single-element compensation." 1999 Transactions on Microwave Theory and Techniques 47.6 (Jun. 1999, Part II [T-MTT]): 956-964.*

Microstrip directional couplers suffer from poor directivity because of inhomogeneous dielectric, i.e., partly dielectric substrate, partly air. It is possible to compensate for this poor performance by introducing a single lumped capacitor or inductor at the edges or center of the coupled region. No attempt at a theoretical design of these couplers has been made in the literature. This paper fills the void by presenting an accurate approach to the design of microstrip directional couplers with ideal match or high directivity of both, using a single capacitive of inductive compensation. The method is valid for tight and loosely coupled structures. The method is validated via design and experimental results.

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