Abstracts

Analysis of Rectangular Spiral Transformers for MMIC Applications (Short Papers)

A. Boulouard and M. Le Rouzic. "Analysis of Rectangular Spiral Transformers for MMIC Applications (Short Papers)." 1989 Transactions on Microwave Theory and Techniques 37.8 (Aug. 1989 [T-MTT]): 1257-1260.

To evaluate rectangular spiral transformers for use in microwave monolithic integrated circuits (MMIC's) on GaAs substrate, we have calculated the chain matrices of multiconductor coupled line sections and bends from multimode characteristic impedances and effective dielectric constants. A new kind of MMIC transformer, called a triformer, has been analyzed by this method and may be used as an integrated circuit balun. Theoretical results are presented for components over the range 1-10 GHz and compared to measurements.

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