# Abstracts

## Computer-Aided Synthesis of a Lossy Commensurate Line Network and its Application in MMIC's

*L. Zhu. "Computer-Aided Synthesis of a Lossy Commensurate Line Network and its Application in MMIC's." 1991 Transactions on Microwave Theory and Techniques 39.4 (Apr. 1991 [T-MTT]): 654-659.*

In this paper, a useful theorem which extends a previously introduced lossy transformation technique to more general applications is proposed for transformation between distributed lossy and lumped lossless networks, and a corollary is given for extension of the well-know Kuroda identities to the general lossy case. A new computer-aided approach is developed for the synthesis of lossy commensurate line networks with all lines having arbitray frequency-dependent losses. As an application, two broad-band amplifiers are designed for monolithic microwave integrated circuits (MMIC's) and their performances are compared with the examples in [2] and [3].

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