Abstracts

Real Frequency Technique Applied to the Synthesis of Lumped Broad-Band Matching Networks with Arbitrary Nonuniform Losses for MMIC's (Dec. 1988 [T-MTT])

A new computer-aided synthesis technique is presented in this paper for treating the synthesis of lumped matching networks with arbitrary nonuniform losses. It is especially applicable to the design of the broad-band amplifiers in MMIC's. A new, useful theorem and two corollaries are developed for the transformation between lossy or lossless networks and lossless ones, so that the design of the lossy matching networks is considerably simplified relative to [1] and can yield any complex models of the lumped elements with arbitrary nonuniform losses. An example is given to show the general applications of the new method in monolithic broadband amplifier design.

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