Abstracts

Lumped Lossy Circuit Synthesis and its Application in Broad-Band FET Amplifier Design in MMIC's (Short Papers)

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In this paper, a lumped lossy circuit is synthesized by means of the transformation introduced in [1]. The circuit contains two different kinds of lossy branches, in which arbitrary nonuniform reactive resistors, as well as lossy inductors and capacitors, are included. This new approach can synthesize a lumped lossy matching network more flexibly than ever before. An example is presented to show the application of the synthesis of the lumped lossy matching networks in the design of a broad-band microwave integrated FET amplifier, and the advantages of the new technique can be clearly seen by comparison with the amplifier designed by the method in [1].

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