Abstracts

Optimization of Gain, VSWR and Noise of the Broadband Multistage Microwave MMIC Amplifier by the Real Frequency Method. Synthesis in Lumped and Distributed Elements

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Up until now the simplified "real frequency" technique has been applied to the design of broadband multistage microwave amplifiers where gain and VSWR are optimized. In this paper we extend the method to the optimization of the noise figure in parallel with the gain and VSWR. The synthesis of the networks is carried out in two ways, with lumped elements and distributed elements. Then we give several examples of design; ultra wide band GaAs monolithic amplifier, transimpedance amplifier for optical receivers and low noise ultra wide band amplifier.

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