

عنوان مقاله:

(A Survey of Input Impedance Matching Circuit Design Techniques in Low Noise Amplifiers (LNAs

محل انتشار:

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خلاصه مقاله:

In a low-noise amplifier (LNAs), there are three main features, including: A) Input matching B) Linearity C) Output matching, need to be considered in design. Input impedance matching is a prominent and fundamental process in designing low noise amplifiers, which is significantly affects performance of the amplifiers such as gain, noise figure, bandwidth and stability. Hence, input impedance matching is an active research area in recent years. The aim of this paper is to study and present diverse input impedance matching techniques in low-noise amplifiers. In this research, different design techniques such as full topology resistive matching, common gate matching, source inductive degeneration, resistive feedback matching, cascade matching and differential matching as well as new methods series resistor matching and virtual active matching are reviewed and discussed. Furthermore the performance indexes of the proposed techniques are evaluated and compared.

کلمات کلیدی:

Input impedance matching, Low noise amplifier, Narrowband, Wideband

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