Abstracts

Active Microwave Filters with Noise Performance Considerations

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Active microwave filters offer a unique solution for certain filtering problems in modern microwave integrated circuit applications. A number of authors have reported novel active filter topologies in this connection; however, noise considerations for these exotic designs have seldom been addressed, and only Bonetti and Williams have provided actual reliable repeatable measured noise data across a band of frequencies. The main objective of this paper is to present a precision computer-oriented technique to accurately predict and quantify the noise performance of various active microwave filter realizations. Experimental examples are presented which validate the computer-oriented simulation methodology. Noise performance results are presented for a representative realization of each class of active microwave filter considered.

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