

Abstracts

Low Noise Oscillators

J.K.A. Everard. "Low Noise Oscillators." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 1077-1080.

A large number of papers have been published on low noise oscillators however they are usually very specific to the particular application. This paper will describe a set of design rules which are general and can be used to produce oscillators with very low noise performance where both additive (thermal noise) and Flicker noise are considered. Linear theories will be described which accurately describe the noise performance of resonator type oscillators. The limits set by varactor diodes on the noise performance will be described and the noise degradation caused by open loop phase error will be shown. Seven design examples will be demonstrated which show close correlation with the theory.

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