

Abstracts

Parametric Harmonic Balance

Y. Thodesen and K. Kundert. "Parametric Harmonic Balance." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1361-1364.

Harmonic balance has established itself as an important technique for simulating high frequency circuits. However, this simulator struggles on strongly nonlinear circuits, particularly if there are several input signals at different frequencies. An important observation is that multi-tone nonlinear circuits usually react in a strongly nonlinear fashion in response to one signal, but in near-linear fashion in response to the others. In this paper we present an extension of harmonic balance that exploits these properties to reduce the time and memory required to perform accurate circuit-level frequency-domain simulation of mixers.

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