Abstracts

An Almost-Periodic Fourier Transform for Use with Harmonic Balance

G.B. Sorkin, K.S. Kundert and A. Sangiovanni-Vincentelli. "An Almost-Periodic Fourier Transform for Use with Harmonic Balance." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 717-720.

Harmonic balance is a powerful technique for the simulation of mildly nonlinear microwave circuits. This technique has had limited application for tie analysis of almost-periodic circuits, such as mixers, due to the difficulties of transforming waveforms from the time domain to the frequency domain and vice versa. In this paper, a new Fourier transform algorithm for almost-periodic functions (APFT) is developed that is both efficient and accurate. Unlike previous attempts to solve this problem, the new afgorithm does not constmin the input frequencies and uses the theoretically minimum number of time points.

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