Abstracts

A fast PEEC technique for full-wave parameters extraction of distributed elements

Swee Ann Teo, Ban Leong Ooi, Siou Teck Chew and Mook Seng Leon. "A fast PEEC technique for full-wave parameters extraction of distributed elements." 2001 Microwave and Wireless Components Letters 11.5 (May 2001 [MWCL]): 226-228.

In this paper, a full wave partial element equivalent circuit (PEEC) technique using exact Green's function is introduced for the parameter extraction of a passive device in a homogeneous media over a wide frequency range from de to a frequency of interest. This technique makes use of some analytical techniques and cartesian multipole expansion to derive simple closed form expressions for each individual element of the coupling matrices that commonly arise in integral equation algorithms, in terms of the wave number alone. Hence, these matrices can be reused each time a new frequency is selected. As simple closed form expressions are used, very fast computation is possible.

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