

Abstracts

Application of Sonie-Schafheitlin formula and sampling theorem in spectral-domain method

B.-L. Ooi, P.-S. Kooi and M.-S. Leong. "Application of Sonie-Schafheitlin formula and sampling theorem in spectral-domain method." 2001 Transactions on Microwave Theory and Techniques 49.1 (Jan. 2001 [T-MTT] (Mini-Special Issue on 2000 Radio-Frequency Integrated Circuits (RFIC) Conference and Automatic Radio Frequency Techniques Group (ARFTG) Meeting)): 210-213.

In this paper, the Sonie-Schafheitlin integration formula and the sampling theorem are integrated into the conventional spectral-domain method to form an efficient and fast convergent hybrid method. As a simple demonstration of the method, the novel technique is applied to the microstrip dispersion problem. The incorporation of the Sonie-Schafheitlin integration formula and the sampling theorem aid to accelerate the convergence of the Sommerfeld integral. Good agreement between the simulated results and the conventional method are obtained.

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