Abstracts

Using selective asymptotics to accelerate dispersion analysis of microstrip lines

S. Amari, R. Vahldieck and J. Bornemann. "Using selective asymptotics to accelerate dispersion analysis of microstrip lines." 1998 Transactions on Microwave Theory and Techniques 46.7 (Jul. 1998 [T-MTT]): 1024-1027.

A selective asymptotic technique (SAT) to accelerate the elements of the impedance matrix in the conventional spectral-domain approach (SDA) is presented. Instead of using the full asymptotic expression of the Green's functions, only those parts which cannot be evaluated in closed form are approximated by their asymptotic expressions. The resulting expressions are more accurate and systematic, as no additional parameter is introduced. The technique is applied to determine the effective dielectric constant of an open microstrip line to demonstrate its efficiency.

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