Abstracts

De-Embedding Correction for Imperfect Absorbing Boundary Conditions in FDTD

F. Moglie, S. Amara, T. Rozzi and E. Martelli. "De-Embedding Correction for Imperfect Absorbing Boundary Conditions in FDTD." 1996 Microwave and Guided Wave Letters 6.1 (Jan. 1996 [MGWL]): 37-39.

The finite differences in the time domain (FDTD) technique is a very powerful method for field evaluation in complex structures. In many cases knowledge of the field is unnecessary, because that of the scattering parameter suffices. We introduce a very simple, fast, and easy-to-implement method to correct the absorbing boundary condition (ABC) errors in the scattering parameter evaluation arising from any ABC, however imperfect this method allows universal use of any simple ABC for any transmission media, therefore facilitating the development of general purpose codes. The technique is based on the evaluation of the reflection coefficient due to the absorbing boundary condition and a subsequent correction in the frequency domain.

❑ Return to main document.