

Abstracts

A novel implementation of Berenger's PML for FDTD applications

*F. Akleman and L. Sevgi. "A novel implementation of Berenger's PML for FDTD applications." 1998 *Microwave and Guided Wave Letters* 8.10 (Oct. 1998 [MGWL]): 324-326.*

In this letter, a new implementation of the three-dimensional (3-D) perfectly matched layer (PML) in finite-difference time-domain (FDTD) applications is introduced. This technique is based on doubling the cell dimensions in PML region where extra averaging of electrical field components are necessary at the edges and faces along the PML-FDTD interfaces. The presented numerical examples are for 3-D structures which exhibit complex wave phenomena. Significant improvement obtained after this implementation, especially at lower frequencies, is demonstrated.

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