Abstracts

Near and far field characterization of radiation from ultra-fast electronic systems

K.A. Remley, A. Weisshaar, S.M. Goodnick and V.K. Tripathi. "Near and far field characterization of radiation from ultra-fast electronic systems." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 1073-1076.

A numerical technique combining the FDTD method with a spatial transformation technique, the Kirchhoff surface integral, is proposed for determination of near and far field radiation from microwave, millimeter wave, or ultra-fast electronic systems. This technique is shown to be extremely accurate, and is often more computationally expedient than use of the FDTD alone. The technique is applied to characterize radiation from structures with inhomogeneous material parameters, offering a more accurate portrait of radiative fields than has been previously reported.

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