

Abstracts

FDTD Analysis of Plane-Wave Diffraction from Microwave Devices on an Infinite Dielectric Slab

T.-T. Hsu and L. Carin. "FDTD Analysis of Plane-Wave Diffraction from Microwave Devices on an Infinite Dielectric Slab." 1996 Microwave and Guided Wave Letters 6.1 (Jan. 1996 [MGWL]): 16-18.

A 2-D (two-dimensional) Huygens surface is developed for the finite difference time domain (FDTD) algorithm, allowing the investigation of pulsed plane-wave scattering from arbitrary 2-D structures placed on or in an infinite dielectric slab. Example results are presented for scattering from a perfectly conducting strip on an infinite dielectric slab, and the results are compared with data computed via the method of moments. Additionally, the diffraction from a finite, saw-tooth dielectric grating on an infinite dielectric slab is investigated.

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