Abstracts

Full-wave analysis of a nonradiative dielectric waveguide with a pseudochiral /spl Omega/-slab

A.L. Topa, C.R. Paiva and A.M. Barbosa. "Full-wave analysis of a nonradiative dielectric waveguide with a pseudochiral /spl Omega/-slab." 1998 Transactions on Microwave Theory and Techniques 46.9 (Sep. 1998 [T-MTT]): 1263-1269.

This paper presents a new microwave device - a non-radiative dielectric (NRD) waveguide with a dielectric pseudochiral /spl Omega/-slab - the /spl Omega/-NRD waveguide. A rigorous full-wave analysis is presented and the modal equations for the longitudinal-section magnetic (LSM) and longitudinal-section electric (LSE) modes are derived. The dispersion curves and operational diagrams for the first hybrid LSM modes are presented. The effect of the pseudochiral /spl Omega/-medium is discussed. New interesting modal features are revealed, showing that the propagation characteristics may differ considerably from the common isotropic case.

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