

Abstracts

A Treatment of Magnetized Ferrites Using the FDTD Method

J.A. Pereda, L.A. Vielva, A. Vegas and A. Prieto. "A Treatment of Magnetized Ferrites Using the FDTD Method." 1993 Microwave and Guided Wave Letters 3.5 (May 1993 [MGWL]): 136-138.

The FDTD method is extended to include magnetized ferrites. The treatment of the ferrite material is based on the equation of motion using Gilbert's approximation of the damping term. The validity of the formulation is verified by applying it to the calculation of propagation constants in waveguides containing ferrites with transverse magnetization. The results for a rectangular waveguide filled with ferrites and those for a rectangular waveguide loaded with a centered ferrite slab are compared with the exact ones.

 [Return to main document.](#)