Abstracts

Dispersion Analysis of TLM Node for Modeling General Anisotropic and Gyromagnetic Materials

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In this paper the dispersion relation for the three-dimensional TLM condensed node for modeling materials with arbitrary permittivity and permeability tensors is presented, and the dispersion error associated with the TLM model for these media is studied. A full dispersion analysis of the TLM node is performed when modeling sapphire substrates and gyromagnetic material. The study lays the foundation for minimizing the numerical dispersion error when modeling such media.

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