

Abstracts

Group and Phase Velocities in the TLM-Symmetrical-Condensed Node Mesh

J.A. Morente, G. Gimenez, J.A. Porti and M. Khalladi. "Group and Phase Velocities in the TLM-Symmetrical-Condensed Node Mesh." 1994 Transactions on Microwave Theory and Techniques 42.3 (Mar. 1994 [T-MTT]): 514-517.

This paper presents the analytical expressions of group and phase velocities as a function of frequency in the TLM-symmetrical-condensed node mesh for the three fundamental directions. The direction $[1, 1, 1]$ happens to be more dispersive than the directions $[1, 1, 0]$ and $[1, 0, 0]$, giving the TLM-symmetrical-condensed formulation dispersion characteristics similar to those of the FD-TD algorithm with a Courant number of $1/\sqrt{3}$.

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