Abstracts

The time-frequency interpretation for transient evolution of wave propagation through dispersive medium

Dong Xiaoting, Jiang Yansheng and Wang Wenbing. "The time-frequency interpretation for transient evolution of wave propagation through dispersive medium." 2001 Microwave and Wireless Components Letters 11.6 (Jun. 2001 [MWCL]): 267-269.

The propagation of electromagnetic waves in a linear, dispersive Lorentz medium is calculated using the finite-difference time-domain (FDTD) method; their time-frequency (TF) characteristics are studied using the Gabor extension. Numerical results show that the TF spectrum gives a clear interpretation for transient evolution of ultra wideband pulse propagation through a Lorentz medium.

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