

Abstracts

A fast technique for analysis of waveguides

P. Przybyszewski, J. Mielewski and M. Mrozowski. "A fast technique for analysis of waveguides." 1998 Microwave and Guided Wave Letters 8.3 (Mar. 1998 [MGWL]): 109-111.

The authors present a new technique for fast calculation of dispersion characteristics in inhomogeneously loaded waveguides. The method calculates an approximate value of propagation constant at a desired frequency based on more accurate computations of the field distribution and propagation constant at a few selected frequency points. Numerical tests show that the relative error in propagation constant below 0.05% can easily be obtained throughout a very wide frequency band for a dominant mode using accurate data calculated at as few as four frequency points.

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