Abstracts

Single-Mode Pulse Dispersion in Optical Waveguides

E.F. Kuester and D.C. Chang. "Single-Mode Pulse Dispersion in Optical Waveguides." 1975 Transactions on Microwave Theory and Techniques 23.11 (Nov. 1975 [T-MTT]): 882-887.

The limitations of a widely used method for analyzing pulse distortion in a single-mode waveguiding structure are derived. The results are applied to propagation in optical waveguides, and for cases where material dispersion is dominated by a broad resonance line, pulse attenuation is found to be much more serious than the broadening of the pulse. In extremely low-loss regions, however, other effects may cause the reverse to be true.

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