

Abstracts

New Waveguide Structures for Millimeter-Wave and Optical Integrated Circuits (Oct. 1975 [T-MTT])

W.V. McLevige, T. Itoh and R. Mittra. "New Waveguide Structures for Millimeter-Wave and Optical Integrated Circuits (Oct. 1975 [T-MTT])." 1975 Transactions on Microwave Theory and Techniques 23.10 (Oct. 1975 [T-MTT]): 788-794.

Some new dielectric waveguide structures suitable for millimeter-wave and optical integrated circuits are presented. A method of analyzing wave propagation in these guides is developed by assuming simple field distribution and approximating the various regions of the guides in terms of effective dielectric constants. The mathematical formulation utilized results in simple eigenvalue equations from which the dispersion characteristics of the waveguides are readily obtained. Experimental results are described and the agreement between theory and experiment is shown to be quite good.

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