Abstracts

Ridged Waveguide for Planar Microwave Circuits (Short Papers)

R.O.E. Lagerlof. "Ridged Waveguide for Planar Microwave Circuits (Short Papers)." 1973 Transactions on Microwave Theory and Techniques 21.7 (Jul. 1973 [T-MTT]): 499-501.

A TE-mode planar transmission line is analyzed. It has a cross section as a ridged waveguide where the ridges are very thin. It is easily fabricated by photoetching of copper-clad dielectric boards, but can also be made without dielectrics for low-loss applications. Thus, it can be integrated together with other planar transmission lines like, for example, striplines. Besides the simplicity in feeding by stripline, the guide can be made smaller than an ordinary rectangular waveguide. It has applications in filters, resonators, balun-transitions, antenna feeds, etc. The characteristic impedance of the transmission line and its free-space cutoff wavelength are calculated and given in a diagram.

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