Abstracts

Design of compact waveguide twists

P.I. Alonso-Juaristi, J. Esteban and J.M. Rebollar. "Design of compact waveguide twists." 1997 Transactions on Microwave Theory and Techniques 45.5 (May 1997, Part I [T-MTT]): 636-639.

A new geometry for compact twist components composed of rectangular and circular waveguide sections is presented. The proposed twist geometry presents several advantages: 1) It can be designed for any rotation angle; 2) it is extremely short and, therefore, well suited for satellite communication applications; 3) its electrical behaviour is excellent for either narrow or broad frequency bands; and 4) a very accurate and efficient full-wave mode-matching method can be used to analyze these twists. A software package has been developed to design the proposed compact twist structure in a full-wave method.

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