

Abstracts

Radial Mode Matching Analysis of Ridged Circular Waveguide

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Single ridged circular waveguides are useful for the development of compact septum polarizers. The design of these structures is based on the knowledge of modes in the semicircular and ridged waveguide sections. In this paper a radial mode matching analysis is presented to calculate rigorously the TE and TM modes that are excited in such a structure. Results are presented for variations of the ridge depth and ridge thickness and are compared to results from a finite element analysis.

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