Abstracts

Optimization of novel high-power millimeter-wave TM/sub 01/-TE/sub 11/ mode converters

Shiwen Yang and Hongfu Li. "Optimization of novel high-power millimeter-wave TM/sub 01/-TE/sub 11/ mode converters." 1997 Transactions on Microwave Theory and Techniques 45.4 (Apr. 1997 [T-MTT]): 552-554.

In this paper, a numerical study of direct TM/sub 01/-TE/sub 11/ mode converters in highly overmoded, bent smooth, circular waveguides is presented for high-power millimeter waves. The various shapes of bent waveguides are elaborately chosen, and their optimized geometrical dimensions have been achieved with a general optimization code employing the coupled mode theory. The mode converters designed can have high conversion efficiencies over 98% and wide bandwidths of 28%.

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