Abstracts

Symmetrically Truncated Right-Angle Corners in Parallel-Plate and Rectangular Waveguides

J.J. Campbell and W.R. Jones. "Symmetrically Truncated Right-Angle Corners in Parallel-Plate and Rectangular Waveguides." 1968 Transactions on Microwave Theory and Techniques 16.8 (Aug. 1968 [T-MTT]): 517-529.

The symmetrically truncated right angle E-plane corner is investigated as a function of the position of the truncation plane. The problem is treated by placing electric and magnetic walls in the plane of symmetry of the bend and solving the resulting boundary value problems assuming an incident TEM mode in parallel-plate waveguide. The results are directly applicable to the same type of corner in rectangular waveguide. In analyzing the problem an infinite set of first order differential equations arise which are appropriately truncated and solved on an electronic computer by means of a fourth order Runge-Kutta scheme.

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