

Abstracts

Reflection Coefficient of a Waveguide with Slightly Uneven Walls

D.A. Hill. "Reflection Coefficient of a Waveguide with Slightly Uneven Walls." 1989 Transactions on Microwave Theory and Techniques 37.1 (Jan. 1989 [T-MTT]): 244-252.

First-order results are derived for the reflection coefficient of a waveguide with slightly uneven walls. Specific analytical and numerical results are given for rectangular waveguides and coaxial transmission lines. Simple upper bounds are given for reflection coefficients in terms of the maximum deviation of the waveguide. For typical tolerances the reflection coefficients are very small ($<10^{-3}$), but the results are important in precise six-port measurements.

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