

Abstracts

A Proposal of Low-Loss Leaky Waveguide for Submillimeter Waves Transmission

M. Miyagi and S. Nishida. "A Proposal of Low-Loss Leaky Waveguide for Submillimeter Waves Transmission." 1980 Transactions on Microwave Theory and Techniques 28.4 (Apr. 1980 [T-MTT]): 398-401.

A low-loss dielectric leaky waveguide which carries most of the power in air is proposed for long-distance transmission of submillimeter waves, and its guiding mechanism is fully analyzed by using a two-dimensional slab-waveguide model. It is shown that transmission losses of the guide can become several decibels per kilometer and are not significantly affected by dielectric losses of material used for practical guide parameters.

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