

Theoretical and Experimental Characteristics of Single V-Groove Guide for X-Band and 100 GHz Operation

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A conformal mapping technique for single-groove guide has been discussed and applied to grooves of V-shaped cross section. Experimental measurements at X-band and 100 GHz confirm the theoretical predictions. The characteristic equation and scale factor of the fundamental mode have been developed, and its propagation characteristics are given graphically for several normalized groove dimensions.

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