

Slit-Coupled Ridge Waveguide T-Junctions

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The slit-coupled ridge waveguide T-junction is introduced and modeled using the single-port mode matching technique. The three-port scattering matrix of the T-junction is obtained from nine reflection coefficient computations at the perpendicular arm. Dependence of S-parameters on the slit thickness and width is given. Ridge T-junctions are analyzed as a special case of slit-coupled ridge T-junction and the computed S-parameters are in good agreement with available results.

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