Abstracts

Simple and Accurate Solutions of the Scattering Coefficients of E-Plane Junctions in Rectangular Waveguides (Short Papers)

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Simple and accurate solution of the scattering coefficients of the E-plane right-angle bend in rectangular waveguide is presented. The solution is obtained by the mode-matching method in which the electromagnetic fields in waveguides are matched with those in junction section formed by a sectoral region. In the same procedure, the solutions of the scattering coefficients of the E-plane T-junction and the cross junction can be also obtained easily. By using the numerical results, the scattering properties of the dominant modes and higher-order modes in the E-plane right-angle bend are examined in detail.

❑ Return to main document.