Abstracts

Spectral Domain Technique for the Analysis of Waveguide Junction with Anisotropic Media

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A rigorous analysis of a waveguide junction with lossy arbitrarily shaped anisotropic media is proposed. The analysis is based on the equivalence principle and the spectral domain technique and being dependent on neither the geometrical symmetry of the junction nor the number of ports. To demonstrate the validity of the method, H- and E-plane Y-junction circulators are considered. The influences of the magnetic and dielectric losses on the performance of the circulators are examined.

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