Abstracts

The Relationship Between Dual Mode Cavity Cross-Coupling and Waveguide Polarizers

R. Levy. "The Relationship Between Dual Mode Cavity Cross-Coupling and Waveguide Polarizers." 1995 Transactions on Microwave Theory and Techniques 43.11 (Nov. 1995 [T-MTT]): 2614-2620.

Cross-coupling in dual-mode cavity filters may be obtained by introducing an asymmetry within the cavity cross section at an angle of 45° to the two orthogonal modes. This paper presents a novel formula relating the resulting cross coupling coefficient between the orthogonal resonances to the polarization of a waveguide polarizer. Previous theories for such polarizers may then be applied directly to the dual mode filter situation. Formulas enabling the dimensions of the asymmetries for required coupling coefficients are presented for square and circular waveguide cross sections.

❑ Return to main document.