Abstracts

A Novel Coupling Method for Dual Mode Waveguide or Dielectric Resonator Filters

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A new method for coupling dual mode waveguide or dielectric resonator cavities is described and analyzed. The method provides a practical, flexible, economic means of replacing irises, and offers easy tunability of the coupling over a wide range of coupling values. Calculation of the resonator's coupling parameters using the mode matching methods yields accurate results and is verified by measurements. An experimental X-band 4-pole dual mode elliptic function waveguide cavity filter using the new coupling method was constructed and tested. The test results showed excellent agreement with theory.

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