Abstracts

Rectangular Waveguide Dual-Mode Filters without Discontinuities Inside the Resonators

R. Orta, P. Savi, R. Tascone and D. Trinchero. "Rectangular Waveguide Dual-Mode Filters without Discontinuities Inside the Resonators." 1995 Microwave and Guided Wave Letters 5.9 (Sep. 1995 [MGWL]): 302-304.

A new configuration of rectangular waveguide dual-mode filters is presented where no discontinuity is present inside the cavities. It is based on the idea that coupling between the two diagonal modes in a square waveguide resonator can be obtained by deforming the square cross-section into a rectangular shape. Hence, no discontinuity is needed to couple the two diagonal polarizations. As a consequence, the input/output rectangular waveguide cross-sections are rotated by 45° with respect to those of the resonator. The advantages of this configuration are related to the fact that all the cross-sections (as well as the coupling apertures) are rectangular and no tuning is needed.

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