

Abstracts

Mixed Modes Cylindrical Planar Dielectric Resonator Filters with Rectangular Enclosure (Dec. 1995, Part II [T-MTT])

C. Wang, H.-W. Yao, K.A. Zaki and R.R. Mansour. "Mixed Modes Cylindrical Planar Dielectric Resonator Filters with Rectangular Enclosure (Dec. 1995, Part II [T-MTT])." 1995 Transactions on Microwave Theory and Techniques 43.12 (Dec. 1995, Part II [T-MTT] (1995 Symposium Issue)): 2816-2822.

A compact mixed modes cylindrical planar dielectric resonator filter in a rectangular enclosure is presented. Space coupling between the resonators excited in different modes and iris coupling between the identical resonators are realized in the filter. All the couplings and resonant frequencies of the DR cavities are computed by a rigorous full wave mode matching method and a cascading procedure using generalized scattering matrices. A 6-pole elliptic function filter is designed and constructed, and the measured filter frequency responses verify the theory.

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