Abstracts

Canonical and Longitudinal Dual-Mode Dielectric Resonator Filters without Iris

K.A. Zaki, C. Chen and A.E. Atia. "Canonical and Longitudinal Dual-Mode Dielectric Resonator Filters without Iris." 1987 Transactions on Microwave Theory and Techniques 35.12 (Dec. 1987 [T-MTT] (1987 Symposium Issue)): 1130-1135.

Two bandpass filter realizations using dual-mode dielectric resonators in simple tubular enclosures are described. The new configurations do not require iris to achieve the couplings among the resonators. This eliminates the need for the most expensive machined parts of the filters, which require tight tolerances. The realizations also achieve lower midband insertion losses than comparable filters with iris, because conduction currents on the metallic cavity ends are eliminated. Measured results on two four-pole elliptic function experimental filters realized in the new structures agreed closely with theory.

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