Abstracts

Application of Dual TM Modes to Triple- and Quadruple-Mode Filters

R.R. Bonetti and A.E. Williams. "Application of Dual TM Modes to Triple- and Quadruple-Mode Filters." 1987 Transactions on Microwave Theory and Techniques 35.12 (Dec. 1987 [T-MTT] (1987 Symposium Issue)): 1143-1149.

The cylindrical cavity dual orthogonal transverse magnetic (TM) mode is introduced as a basic building block for the realization of microwave multiple-coupled-cavity bandpass filters. ‘This concept is shown to offer significant advantages in the design of triple-mode filters and permits the design of the new quadruple-mode filter. Experimental verification is provided by the realization of a triple-mode, six-pole elliptic function bandpass filter with dual TM/sub 110/ and single TE/sub 211/ (transverse electric) modes and a quadruple-mode, eight-pole bandpass filter with dual TM/sub 110/ and dual TE/sub 112/ mode cavities. All units exhibit good agreement between theory and experiment.

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