Abstracts

Design of Coupling Irises Between Circular Cavities by Modal Analysis

L. Accatino and G. Bertin. "Design of Coupling Irises Between Circular Cavities by Modal Analysis." 1994 Transactions on Microwave Theory and Techniques 42.7 (Jul. 1994, Part II [T-MTT] (Special Issue on Filters and Multiplexers)): 1307-1313.

Single and dual iris coupling between circular waveguide cavities is studied using a rigorous mode-matching approach. Single, dual, and triple mode coupling irises are considered. It is seen that triple mode coupling can be achieved and controlled employing only a dual iris configuration. The analysis is performed by means of the generalized S-matrix technique; frequency dependence and finite thickness are accurately taken into account, and extensions to other types of coupling, i.e., coupling to an external input waveguide are straightforward. Measured results on dual and triple mode irises show close agreement with computations.

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