

Abstracts

Design of Aperture-Coupled Filters

F. Shnurer. "Design of Aperture-Coupled Filters." 1957 Transactions on Microwave Theory and Techniques 5.4 (Oct. 1957 [T-MTT]): 238-243.

A procedure for the design of aperture-coupled Filters is presented, based on the theory of conventional coupled circuits. This design procedure accounts for the relatively low insertion loss of aperture-coupled filters as compared with other known designs of microwave filters. The factors which contribute to this low value of insertion loss are the following: 1) Use of a high Q-mode configuration such as a cylindrical cavity in the TE₀₁₁ mode. 2) Aperture coupling of elements eliminating the losses of impedance transforming sections of transmission line. 3) A mechanical design which eliminates joints at critical points and also provides control over interior surface finishes.

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