

Consideration of Parasitic Bypass Couplings in Overmoded Cavity Filter Designs

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Parasitic bypass couplings-occurring especially in compact higher order mode cavity filters-cause evident deterioration of the desired ideal responses. The study of a TE/sub 301/ mode cavity filter design gives an explanation of the reasons of such unwanted couplings. Based on this knowledge, corrective measures are established and experimentally verified to compensate for unwanted deviations from the ideal filter response. Moreover, this kind of bypass coupling can be utilized to improve the response in advanced cavity filter designs.

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