Abstracts

Dual mode combined dielectric and conductor loaded cavity filters

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A new configuration of dual mode combined dielectric and conductor loaded cavity filter is presented. Using one or two conductor loaded cavities with dielectric loaded cavities, both low loss and excellent spurious performance are achieved. Resonant frequencies, unloaded Q and the fields of both resonators are rigorously computed by mode matching method. The coupling between two resonators is computed by small aperture approximation theory. Three different types of 4-pole elliptic function filters under same condition are constructed. Insertion loss and spurious performance of the filters are compared. Experimental results verify the theory.

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