Abstracts

Conductor loaded resonator filters with wide spurious free stop band

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A new configuration of conductor loaded resonator filters using two different sized conductor loaded resonators is presented. The spurious performance of the conductor loaded resonator filters are significantly improved. A rigorous mode matching method is used to compute the resonant frequency, unloaded Q and the field of the resonant mode of the conductor (solid or ring) loaded resonators. The coupling coefficients between two resonators are computed using small aperture theory by Levy's approach. An 8-pole elliptic function filter is designed, constructed and tested. Experimental results verify the theory.

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