Abstracts

Filter topologies with minimum peak stored energy

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In this paper the question of enhancing the power handling capability of resonator filters by choosing a suitable filter topology which maximally reduces the peak time averaged stored energy (t.a.s.e.) is addressed. A well known network transformation that alters the filter topology but leaves the 2-port parameter of the network unchanged is employed. After defining the cost function a stochastic search method is used to find the global minimum. Results presented include Butterworth filter topologies of degree 2 to 5.

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