Abstracts

Direct Synthesis of Cascaded Quadruplet (CQ) Filters (Dec. 1995, Part II [T-MTT])

R. Levy. "Direct Synthesis of Cascaded Quadruplet (CQ) Filters (Dec. 1995, Part II [T-MTT])." 1995 Transactions on Microwave Theory and Techniques 43.12 (Dec. 1995, Part II [T-MTT] (1995 Symposium Issue)): 2939-2944.

Previous designs for CQ filters have required matrix rotation operations on the coupling matrix of the canonic form of the cross-coupled filters. This is a rather awkward and not entirely satisfactory process since the theory is not general, requiring the application of equations specific to each order of filter, and in fact has been developed only as far as even order 10. A new direct CQ synthesis has now been discovered having no such limitations. It is shown how the synthesis may be carried out by applying a new equivalent circuit identity to transform a lumped element filter into a cross-coupled CQ filter.

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