

Cascaded triplet filter design using cascade synthesis approach

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A unified review of the design of Cascaded Triplet (CT) filters is presented. The cascade synthesis approach with pole placement is used to synthesize the filter and then Norton transformations are used to put the circuit into a standard form for conversion into CT form. Sections of the filter containing finite transmission zeros (FTZs) are then converted into bridge tees forming the CT sections. An example is given showing the development of equivalent alternative CT filter structures having all-inductive, all capacitive or mixed cross-couplings, depending on the location of FTZs with respect to the passband.

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