

Synthesis of prototype filters with triplet sections starting from source and load

G. Macchiarella. "Synthesis of prototype filters with triplet sections starting from source and load." 2002 Microwave and Wireless Components Letters 12.2 (Feb. 2002 [MWCL]): 42-44.

Describes a method for synthesizing an inline prototype filter with a triplet section starting from source and/or from load. This topology allows placing one or two transmission zeros without using cross-couplings inside the filter (it is only required to couple the source (or the load) to the first (or the last) two resonators). The proposed method employs the coupling matrix of a generic prototype, obtained through well-established procedures; then, the coupling matrix of the desired inline topology is determined with a procedure based on multiple matrix rotations (similarity transforms) and numerical optimization.

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