Abstracts

A Low-Pass Prototype Network Allowing the Placing of Integrated Poles at Real Frequencies

D.S.G. Chambers and J.D. Rhodes. "A Low-Pass Prototype Network Allowing the Placing of Integrated Poles at Real Frequencies." 1983 Transactions on Microwave Theory and Techniques 31.1 (Jan. 1983 [T-MTT] (Joint Special Issue on Monolithic Microwave IC's)): 40-45.

This paper details a procedure by which a number of attenuation poles can be placed at differing frequencies, giving an asymmetric or symmetrical response, the only restriction being that the network must be physically symmetrical. If a number of poles are placed on one side of the passband, this technique can be used to greatly increase the selectivity of a filter on this side, while maintaining an equiripple passband response. There are four possible arrangements for these filters. They can have even or odd degree with an even or odd number of integrated poles. Only three of these are realizable in a symmetrical network and these possibilities are dealt with individually. An example is given in the case of an odd-degree filter with an odd number of integrated poles placed at two frequencies on opposite sides of the passband.

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