Abstracts

A Multiharmonic Rejection Filter Designed by an Exact Method

B.M. Schiffman. "A Multiharmonic Rejection Filter Designed by an Exact Method." 1964 Transactions on Microwave Theory and Techniques 12.5 (Sep. 1964 [T-MTT]): 512-516.

The exact method for designing band-stop filters in transmission lines is here adapted to design a four-element filter that is perfectly matched at a fundamental frequency and has infinite attenuation (theoretically) at the second, third, and fourth harmonics. The form of the filter is suitable for construction in TEM-mode strip transmission lines. How to obtain other combinations of three infinite rejection frequencies is also shown. Each filter is derived from a Cauer-type prototype network obtained from published tables of element values. The computed response of a test design is seen to be a precise mapping of the response of the prototype.

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