# Abstracts

## Small Elliptic-Function Low-Pass Filters and other Applications of Microwave C Sections

*R.J. Wenzel. "Small Elliptic-Function Low-Pass Filters and other Applications of Microwave C Sections." 1970 Transactions on Microwave Theory and Techniques 18.12 (Dec. 1970 [T-MTT] (1970 Symposium Issue)): 1150-1158.*

A type of elliptic-function low-pass filter that is easy to design and construct, has low passband loss, and is very compact is described. With simple scaling and a limited number of standard parts, a broad range of cutoff frequencies can be obtained. Experimental results are presented for three filters with cutoff frequencies of 0.75, 1.0, and 1.5 GHz. Each filter occupies a volume of about 0.5 in³. A physical interpretation of the conventional scaling transformation S =S'/ Omega/sub c/' is given for networks containing unit elements. Use of this transformation is shown to yield scaled networks containing microwave C sections rather than unit elements. Applications to broad-band impedance transformers are given and other possible applications are suggested.

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