

Abstracts

Synthesis of Comblines and Capacitively Loaded Interdigital Bandpass Filters of Arbitrary Bandwidth

R.J. Wenzel. "Synthesis of Comblines and Capacitively Loaded Interdigital Bandpass Filters of Arbitrary Bandwidth." 1971 Transactions on Microwave Theory and Techniques 19.8 (Aug. 1971 [T-MTT]): 678-686.

Synthesis procedures are presented for commensurate line-length combline and capacitively loaded interdigital filters. A simple modification for using lumped capacitors is given and is found to yield excellent results for any practical bandwidth. The synthesis procedures for both filter types follow directly from the classical bandpass filter design approach using a transformed frequency variable. Two design examples are given to illustrate the design procedures and experimental results are presented for a 40 percent bandwidth combline filter. The problems of network sensitivity, use of network equivalents, and extension to other filter types are also discussed.

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