Abstracts

Wideband bandpass filter design with three-line microstrip structures

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Systematic procedure is described for designing bandpass filters with wide bandwidths based on parallel coupled three-line microstrip structures. It is found that the tight gap sizes between the resonators of end stages and feed lines, required for wideband filters based on traditional coupled line design, can be greatly released. The relation between the circuit parameters of a three-line coupling section and an admittance inverter circuit is derived. A design graph for substrate with /spl epsiv//sub r/=10.2 is provided. Two filters of orders 3 and 5 with fractional bandwidths 40% and 50%, respectively, are fabricated and measured. Good agreement between prediction and measurement is obtained.

❑ Return to main document.