

## **Folded Coupled-Line Microstrip Bandpass Filter with Wide Stopband Design**

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### Abstract

A folded hybrid coupled-line microstrip bandpass filter with multi harmonics suppression and wide stopband bandwidth is proposed in this research. A simple design rule together with an over-coupled and an under-coupled structure is well predicted and applied in this filter to eliminate the spurious responses. Then, the coupled lines are folded to save the circuit space and to tune the third transmission zero for the removal of higher harmonic. Good agreement between simulation and measurement is achieved.

Key words : Folded filter;Transmission zero;Harmonics suppression;Over-coupling;Wide stopband