Abstract

This paper introduces a new approach to design low pass microwave filter using impulse invariant transform. In this approach, the analog specifications of desired low pass filter is transformed into the digital specification and then apply an optimization technique (DSP based) to get an approximate transfer function in digital domain. Further, the transfer function in continuous time domain is obtained by applying inverse impulse invariant technique. Now the lumped element circuit is obtained by using a classical network synthesis technique on the transfer function in analog domain. The theoretical result of low pass microwave filter is also verified on ADS Simulation tool.

References

Design of Low Pass Microwave Filter using Impulse Invariant Transform


Index Terms

Computer Science

Signal Processing

Keywords

Impulse invariant transform  Low-pass filter  Microwave Filter  Quasi-Newton algorithm.