

Abstract

In this paper, an ultra-wide stopband microstrip low-pass filter (LPF) to reject higher harmonics and spurious response for wideband microwave applications is proposed. It is based on quasi-triangular (QT) defected ground structure (DGS) resonators and open stubs. An equivalent circuit model is also presented. The introduced LPF has small size, a low insertion loss and a return loss less than -20 dB. In addition, a round -20 dB suppression level ranging from 4 GHz to more than 20 GHz is achieved. The simulated results obtained by circuit model and full-wave EM show good agreement with the measured ones