Abstract

This paper presents a novel coplanar waveguide (CPW) dual pass band and triple pass band filter using the split-modes of the loaded stub square loop resonators. With the CPW feeding line, two microstrip stub resonators built on the rear sides are used to suppress resonance. We have designed our filter on the FR4 substrate (permittivity = 4.4 and loss tangent=0.02) with 20x50mm square and thickness of 1mm only. The modes splitting characteristics of the
CPW Triple Passband Filter using the Split-modes of Stub Square Loop Resonators

proposed structure are analyzed. A triple pass band filter covering center frequencies of 21.5 GHz, 26.7 GHz and 33.1 GHz or (K band range) is designed to verify the validity of the methodology. Good agreement for simulated results.

References


Index Terms

Computer Science
Communications
Keywords
Band-notched Uwb Antennas  Coplanar Waveguide (cpw) Fed Antennas  Planar Antennas
Printed Circuit Board Antennas
Slot Antennas
(uwb) Antennas
Triple Pass Band Filter