Abstract

The defected structure in the signal plane of a microstrip line effectively disturbs the shield current distribution and added line inductances and capacitances to the line. These new brand of slow-wave structures are called defected microstrip structure (DMS). We have introduced here a new spiral shaped structure with improved filtering characteristics. The frequency
characteristics of the proposed unit show one pole stopband response. The equivalent L C parameters are extracted using proposed equivalent LC model. Two such DMS units are cascaded onto High-Low impedance line to realize a bandstop filter having 20 dB rejection bandwidth of 34% and sharpness factor of 50 dB/GHz at both edges.

Reference


Index Terms

Computer Science Communications

Key words

Defected structure
Slowwave structures
DMS
High-Low impedance line
Bandstop filter

spiral-shaped