Abstract

The WiMAX (3.5 GHz) interference free ultrawideband (UWB) antenna with simplex monopole structure is proposed. An attempt of defected coplanar ground plane with the use of open-ended half wavelength L-shaped slot and stepped pentagonal radiating patch have been made for pure and frequency notched UWB operation with compact size of $32 \times 22 \times 1.6 \text{ mm}^3$. The full UWB and band-notched designs are discussed in detail along with VSWR curves,
surface current distribution and radiation patterns. The full UWB antenna reports a -10 dB impedance bandwidth of 7.65 GHz (2.80-10.45 GHz) while a band-notch design realizes two band having VSWR < 2 bandwidth 710 MHz and 6.59 GHz, which corresponds to FRB 23.31% and 93.84% respectively.

References


Index Terms

Computer Science
Wireless Network
Keywords
Monopole Antenna  Notch-band  Open Ended L-shaped Slot  Staircase Step Stubs  UWB