Abstract

There has been a flourishing prospect of UWB technology in recent years in both communication and other purposes like microwave imaging and radar applications. Recent studies of UWB antenna structures are specially concentrated on microstrip [1], slot and planar monopole antennas [2]. In this work, a small monopole antenna with diamond shape of the patch (30 x 26 mm²) printed microstrip fed monopole antenna has been designed, some parameters like return loss (S11), Voltage Standing Wave Ratio (VSWR), radiation pattern has been performed to test the validity of simulation and verify eligibility of the antenna for the wireless communications purpose. The proposed antenna is simulated in CST Microwave Studio and has surpassed the bandwidth of UWB requirement, which is from 3.1 to 10.6 GHz, and exhibits good UWB characteristics. The -10 dB return loss bandwidth of this antenna element is from 3.34 GHz to more than 19.5 GHz.

References

New monopole Antenna for Ultra Wideband Applications


Index Terms

Computer Science Wireless Communications

Keywords

Ultra Wideband Antennas (UWB) Planar Monopole Antenna finite Integrate Technique (fit)
method Of Moment (mom)