

145. COMPACT HYPER-BAND PRINTED SLOT ANTENNA WITH INCREASED BANDWIDTH

M. Jayamohan (M.E Applied electronics), Mr.S.Santhosh Sahayaraj
Department of electronics and communication engineering
St Peter's college of Engineering & Technology, chennai, India
mjayamohan1991@gmail.com, sanspcet@gmail.com

A compact wider band microstrip patch antenna is designed and simulated successfully. It is based on an elliptical-slot antenna augmented with a parasitic oval patch and driven with a specially engineered microstrip line fed elliptical tuning fork element. The parasitic and driven elements are adjusted along with the elliptical slot to create additional resonance modes; adjust the coupling strengths among all of the design components; facilitate the overlap of adjacent resonance modes; and fine tune the input impedance. The total size of the final optimized antenna is only 30mm x 40mm. It exhibits a -10dB impedance bandwidth from 2.26 to 22.18GHz. Desirable radiation performance characteristics, including relatively stable and omni directional radiation patterns, are obtained over this range. Since a simulated antenna covers the wider range bandwidth, the antenna will be having very much useful for UWB applications.

Keywords – Compact antennas, hyper-band, slot antennas, ultra-wide band antenna.

Journal of Science and Innovative Engineering & Technology