A novel design of fractal using Giuseppe Peano geometry for wireless applications has been presented in this paper. Low cost FR4 glass epoxy substrate with 1.6mm thickness and dielectric constant 4.4 is used to design proposed antennas. The resonant frequency used for calculating the dimensions of proposed antenna is 4GHz. Three iterations of proposed antenna are designed to achieve the miniaturization. Antenna is designed and simulated by using HFSS V13 software and different parameters such as return loss, VSWR, gain has been observed and analyzed. The proposed antenna is useful for different wireless applications as per FCC standards such as bluetooth (2.12-2.95GHz), WLAN (4.82-595GHz), high speed wireless communication (5.92GHz-8.5GHz) and X-band for satellite communication (8-12GHz).


Index Terms

Computer Science Wireless

Keywords

Giuseppe Peano, WLAN, FR4, VSWR, HFSS.