Abstract

Now-a-days wireless communication has made the world a smaller than it used to be a couple of decades ago. With the evolving technologies emerging, a continuous and seamless connectivity with the artificial planetary objects such as Satellite and ground station has become a demand of time. Hence researchers are relentlessly working on to overcome the challenge of integrating a budget-friendly yet miniature in shape and multimode supporting antenna in wireless devices. Microstrip Patch Antenna, a technology invented in the 70s, can easily accommodate the entire requirement. But there are some trade-off in terms of performance and design. In this particular paper we analyzed the performance of a slotted Swastika Shaped microstrip Patch antenna with meta-material layer. The probe feeding technique and design structure provides the antenna to operate in five different frequencies. The antenna resonates at 9. 11 GHz in X band and 12. 56 GHz, 13. 82 GHz, 14. 71 GHz and 15. 50 GHz in X band with return loss of -17. 84 dB, -13. 86 dB, -13. 52 dB, -20. 4 dB and -15. 9 dB respectively of proposed antenna have been examined and discussed.
Performance Study of Swastika Shaped Microstrip Patch Antenna loaded with Meta-material Layer

Performance Study of Swastika Shaped Microstrip Patch Antenna loaded with Meta-material Layer

- Razin Ahmed, Md. Fokrul Islam, “E shaped Microstrip Patch Antenna for Ku band”; Published in International Journal of Computer Applications Volume 80, No. 6, October 2013

**Index Terms**

Computer Science  Communications

**Keywords**

- Microstrip Patch Antenna (MPA)
- Rectangular Microstrip Patch Antenna (RMPA)
- Electromagnetic (EM)
- Meta-material