CEST02_142

Design of (T) and (H) Slotted Rectangular Microstrip Patch Antenna for Wireless Applications

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ABSTRACT

The bandwidth of microstrip antennas is proportional of the thickness of the substrate used. Since most substrates are very thin in terms of wavelengths, the bandwidth is usually small. For this reason, a new geometry is proposed to increase a bandwidth by creating T and H slots in a rectangular patch microstrip antenna. The proposed antenna is intended to work according to WLAN IEEE802.11a (5.15-5.825) GHz. The antenna with a dielectric constant of 4.20 and a thickness of 5 mm is simulated using ADS, advanced design system software. In addition, the performance of T and H slotted rectangular patch antenna is compared with non-slotted rectangular microstrip patch antenna.

Keywords: Microstrip antenna, Feed point, Bandwidth, return loss, ADS.