

Design of a Rectangular Spiral Microstrip Antenna for Wi-Fi Application

This thesis is presented in partial fulfillment the award of the

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AKCNOWLEDGEMENT

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ABSTRACT

This work highlights the design, simulation, analysis and fabrication of a rectangular spiral microstrip antenna (RSMA) for Wi-Fi application. The centre frequency was 2.45 GHz and the bandwidth was 22 MHz. This antenna held omni-directional radiation pattern, voltage standing wave ratio less than 2, return loss less than -10dB, line impedance of 50 Ω and gain of 5dBi. All these parameters were determined by using commercial computer aided design (CAD) software. The antenna was fed by using coaxial cable at the centre. The prototype was fabricated on FR4 substrate with 4.9 dielectric constant and 1.54 mm of thickness. Vector network analyzer (VNA) was used to measure all parameters and antenna training system was used to obtain the radiation pattern of the RSMA. It was observed that the simulated and measured valued were quite close with each other.

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