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## Abstract

In this research work a square corner cut rectangular wide band microstrip patch antenna is presented. A FR4 substrate is used to design a reference antenna of size  $28 \times 37$  mm<sup>2</sup> with partial ground structure feed using microstrip line and results are observed for impedance bandwidth, radiation patterns and antenna gain with the help of CADFEKO, proposed wide band antenna which is design on the FR4 substrate with Partial ground structure and square notch at the lower corners on radiating patch. Results are observed from simulated design and presented current distribution for the same. Simulated impedance band width is 4.21GHz (2.99GHz-7.2GHz). Gain is up to 2.049dBi. Improvement in design antenna is studied, comparison carried out between these designs. Proposed antenna VSWR bandwidth enhance from 31.8GHz to 4.21GHz.

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### **Index Terms**

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### **Keywords**

Microstrip Line; Partial Ground; Square Notch; Wide Band; VSWR bandwidth