

# Abstract

**Ehab Farouk Badran**

## **Analysis Of Stacked Rectangular Microstrip Antenna**

A stacked microstrip antenna with C-type feed is designed in order to enhance the bandwidth. The effect of the various parameters, such as the rotation feed angle ( $\theta$ ), the variations of relative permittivity of parasitic patch ( $\epsilon_{r2}$ ), the distance of the feed point from the center ( $r$ ), and the separation between two stacked patches ( $h_2$ ), have been discussed. Some designs give a good return loss under -40 dB and wide VSWR bandwidth, such as case#2 with  $\epsilon_{r2}=4.26$ , case#4 with  $r=6.2$  mm, case#5 with  $h_2=6.8$  mm, case#1, and case#2 with  $h_2=8.2$  mm. The simulated data are obtained using the IE3D simulator with method of moments (MoM) commercial code. An infinite ground plane has been considered for simulations however, and due to a software constraint, substrate dimensions are infinite.