Abstract

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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 (\thetas), the variations of relative permittivity of parasitic patch (\epsiv_{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 \epsiv_{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.