Abstract

In the recent era of wireless communication, Microstrip antenna (MSA) is hot research topic attracting attentions of many researchers. But MSAs have few foremost drawbacks viz narrow impedance Axial Ratio Bandwidth (A. R. BW), low gain and power handling capability. To overcome these drawbacks, novel hybridization method is proposed. A hybridization method includes array method, parasitic patch on superstrate cover and multi stacking instead of the conventional superstrate cover. To achieve the high efficiency, air is used as dielectric medium between feed patch and ground plane as well as between superstrate and feed patch. Due to low cost, availability and ease of fabrication FR4 material is used as superstrate. Proposed system is implemented using FR4 and the results of simulation clearly indicate parametric variations for the various hybrid methods.

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