عنوان مقاله:

Design Investigation of Microstrip Patch and Half-Mode Substrate Integrated Waveguide Cavity Hybrid Antenna Arrays

محل انتشار:

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خلاصه مقاله:

In this paper, two linear arrays including a linear 1×4 and a planar 2×2 of microstrip patch and halfmode substrate integrated waveguide (SIW) cavity hybrid antenna are introduced and investigated.These are simply implemented using low cost single layer printed circuit board (PCB) process. Thearray element consists of a rectangular microstrip patch with appropriate dimensions in the vicinity of a semi-circular SIW resonator provide a wideband hysbrid antenna. In both antenna arrays a microstripfeeding network including a quarter-wave transformer matching circuit has been used to feed the arrayelements. The size of 1×4 linear array is 1.58λ0×2.87λ0 and planar 2×2 array size is 1.57λ0×1.37λ0. Array structures are numerically and experimentally investigated. The measured and simulated .results including reflection coefficient, radiation patterns and gain of the both arrays are reported

کلمات کلیدی:

Hybrid Antenna , Microstrip Patch , SIW Cavity , Antenna Array