

OPTIMIZATION OF STACKED MICROSTRIP ANTENNA FOR CIRCULAR POLARIZATION

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We propose a new C-type feed location to achieve circular polarization from stacked rectangular microstrip antennas. A systematic process to optimise the axial ratio (AR) bandwidth and ellipticity is presented. A main radiator and a parasitic patch of identical size are considered and the separation between them has been optimized to achieve a directive gain of 8.82 dBi, 3-dB AR-bandwidth of 14% and ellipticity (minimum AR) of 0.07dB at centre frequency. The proposed technique is very useful for rapid design of circularly polarized stacked microstrip antennas with high gain and large AR-bandwidth.