Designs of Dual－band Circularly Polarized Slot Antenna for Satellite／Wireless Communication Systems

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ABSTRACT

In this thesis, a compact CPW-fed dual-band circularly polarized (CP) slot antenna is proposed. The antenna was designed by embedding an L-shaped metallic strip into the slot to obtain low-frequency CP radiation. Embedding an extended tuning-stub protruded from a 50-Ω CPW feedline can result in high-frequency CP radiation. The perturbation owing to the extended feedline and the radiator can themselves excite two space-wise mutually orthogonal resonant modes with an equal amplitude and a phase difference of 90 ° . Finally, the back-patch at the center of the L-shaped metallic strip and slot can be adjusted to give an optimal impedance match in these two CP bands.

Keywords : circular polarization ; axial ratio

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