

عنوان مقاله:

Circularly Polarized Circular Slot Antenna Array Using Sequentially Rotated Feed Network

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خلاصه مقاله:

This paper presents the design, simulation, and measurement of two low-cost broadband circularly polarized (CP) printed antennas: a single element and an array at C band. The proposed single element antenna is excited by an L-shaped strip with a tapered end, located along the circular-slot diagonal line in the back plane. From the array experimental results, the 3 dB axial ratio bandwidth can reach as large as 1900 MHz which covers the 4.7 GHz to 6.6 GHz frequency band. In addition, the measured impedance bandwidth for reflection coefficient of less than -10 dB has the bandwidth with the frequency range from 4.2 GHz to 8 GHz (C Band application). The CP element achieves a bandwidth of 16.6% for an axial ratio less than 3 dB. The proposed antenna array can provide a peak gain of about 8.7 dBic at 5.9 GHz. Acceptable agreements between the simulation and measured results validates the proposed design.

کلمات کلیدی:

Circularly polarized, Circular Slot antenna, Slot antenna array, sequentially rotated array

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