

Title (en)

Dual-polarisation reflectarray antenna with improved cross-polarization properties

Title (de)

Doppelpolarisierungsreflektionsarray-Antenne mit verbesserten Kreuzpolarisierungseigenschaften

Title (fr)

Antenne à réseau de réflexion à double polarisation dotée de propriétés de polarisation croisée améliorées

Publication

EP 2337152 A1 20110622 (EN)

Application

EP 10290640 A 20101203

Priority

ES 200931140 A 20091210

Abstract (en)

Dual-linear polarisation reflectarray antenna with improved cross-polarization properties. The reflectarray antenna consists of a planar array of phasing cells illuminated by a feed, that produces a collimated or shaped beam in dual-linear polarisation, where the phasing cells are made of varying-sized conductive patches with a rotation angle that has been adjusted to minimise the cross-polarisation. In a first implementation, the patches in which the angle of incidence is larger than a prefixed threshold are rotated so that the propagation direction of the incident field is contained on a symmetry plane of the patches. In a second implementation, the rotation angle of the patches in each cell is optimized to minimize the cross-polarisation in a prefixed frequency band. The invention can be applied to dual-polarization antennas in Telecommunication satellites

IPC 8 full level

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CPC (source: EP ES)

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