

Title (en)
BROAD-BAND POLARIZING JUNCTION

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Application
EP 88104293 A 19880317

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DE 3709559 A 19870324

Abstract (en)
[origin: EP0284911A1] The invention relates to a broadband, compact polarising junction which can be manufactured using milling techniques and has a waveguide (4) carrying two orthogonal linear polarisations, a first rectangular waveguide arm (1) of which, which runs at its end axially with respect to the waveguide carrying the two orthogonal polarisations, is branched via a first waveguide fork, designed symmetrically with two partial arms (20, 21), and a second waveguide arm (2) of which originates in the axial direction and is led out laterally, with a rectangular cross-section, via an E-bend (12) from the space between the waveguide fork partial arms (20, 21) and, in whose transition zone to the waveguide carrying the two orthogonal polarisations, there is anchored a centre plate (8), extending over the complete broad side dimension (a) of the waveguide, which is approximately half as wide as the narrow side (b1) of the waveguide and which thus splits the waveguide in this transition zone, in the manner of a fork, into two partial arms (14, 15), taking into account that the characteristic impedances are kept precisely constant. A broadband polarising junction constructed according to the invention can be used in satellites and directional radio antennas. <IMAGE>

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H01P 1/161

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