

Title (en)

COMPACT ORTHOMODE TRANSDUCTION DEVICE OPTIMIZED IN THE MESH PLANE, FOR AN ANTENNA

Title (de)

IN DER GITTER-EBENE OPTIMIERTE KOMPAKTE ORTHOMODUS-TRANSDUKTIONSEINRICHTUNG FÜR EINE ANTENNE

Title (fr)

DISPOSITIF DE TRANSDUCTION ORTHOMODE À COMPACITÉ OPTIMISÉE DANS LE PLAN DE MAILLE, POUR UNE ANTENNE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2008012369A1] An orthomode transduction device (D), for an antenna, comprises i) a principal guide (GP) suitable for propagation along a principal axis of first and second modes having polarizations that are orthogonal to each other and provided with a first end coupled to a circular access (AC) and a second end, ii) a first auxiliary guide (GA1) suitable for the propagation of the first mode along a first auxiliary axis and provided with a first end coupled in series to the second end of the principal guide via a series coupling slot (FSP) and a second end coupled to a series access (AS), and iii) a second auxiliary guide (GA2) suitable for the propagation of the second mode along a second auxiliary axis, coupled to the principal guide via a parallel coupling slot (FPL) and provided with a first end coupled with a parallel access (AP). The first (GA1) and second (GA2) auxiliary guides are stacked. The parallel coupling slot (FPL) is defined between an upper wall (PS) of the principal guide (GP) and a lower wall (PI) of the second auxiliary guide (GA2) and oriented with respect to the principal axis in order to allow the coupling of the principal guide to the second auxiliary guide for the selective transfer of the second mode from one to the other, and to restrain the first mode from propagating between the principal guide and the first auxiliary guide.

IPC 8 full level

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