

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

EP 2047564 A1 20090415 (FR)

Application

EP 07788011 A 20070727

Priority

- EP 2007057797 W 20070727
- FR 0653180 A 20060728

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

H01Q 13/02 (2006.01); **H01P 1/161** (2006.01); **H01Q 21/06** (2006.01)

CPC (source: EP KR US)

H01P 1/16 (2013.01 - KR); **H01P 1/161** (2013.01 - EP US); **H01Q 13/02** (2013.01 - KR); **H01Q 13/0258** (2013.01 - EP US); **H01Q 21/06** (2013.01 - KR); **H01Q 21/064** (2013.01 - EP US)

Citation (search report)

See references of WO 2008012369A1

Cited by

FR3146549A1; WO2024189480A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2008012369 A1 20080131; AT E484090 T1 20101015; CA 2659345 A1 20080131; CA 2659345 C 20151201; CN 101512837 A 20090819; CN 101512837 B 20121031; DE 602007009689 D1 20101118; EP 2047564 A1 20090415; EP 2047564 B1 20101006; ES 2350961 T3 20110128; FR 2904478 A1 20080201; FR 2904478 B1 20100423; JP 2009545221 A 20091217; JP 5292636 B2 20130918; KR 20090035009 A 20090408; RU 2009107172 A 20100910; RU 2422956 C2 20110627; US 2009309674 A1 20091217; US 7944324 B2 20110517

DOCDB simple family (application)

EP 2007057797 W 20070727; AT 07788011 T 20070727; CA 2659345 A 20070727; CN 200780032260 A 20070727; DE 602007009689 T 20070727; EP 07788011 A 20070727; ES 07788011 T 20070727; FR 0653180 A 20060728; JP 2009521281 A 20070727; KR 20097003865 A 20090225; RU 2009107172 A 20070727; US 37529707 A 20070727