

Title (en)

Filtering device for electromagnetic waves in a waveguide with symmetry around the rotational axis, and inserted pieces of rectangular waveguide

Title (de)

Filtervorrichtung für elektromagnetische Wellen in einem Wellenleiter mit Rotationssymmetrie, und eingefügten rechteckigen Wellenleiterstücken

Title (fr)

Dispositif de filtrage d'ondes électromagnétiques circulant dans un guide d'ondes à symétrie de révolution, à tronçons de guides d'ondes de filtrage rectangulaires insérés

Publication

**EP 0520919 B1 19960612 (FR)**

Application

**EP 92460018 A 19920624**

Priority

FR 9108137 A 19910626

Abstract (en)

[origin: EP0520919A1] The field of the invention is that of the filtering of electromagnetic waves travelling in axisymmetric waveguides, in particular circular waveguides. <??>The invention relates to a device for filtering electromagnetic waves travelling in a main axisymmetric waveguide element (41A, 41B) extending along an axis of symmetry (45), comprising at least one rectangular waveguide segment (42), inserted by way of substitution into the said main waveguide element (41A, 41B), each transition (44A, 44B) between the said main waveguide element (41A, 41B) and each of the said filtering segments (42) consisting of a metal wall substantially perpendicular to the said axis of symmetry (45), the number and the geometrical and/or dimensional characteristics of the said rectangular waveguide segments (42) being chosen so as to constitute a filter with predetermined filtering profile. <??>The invention finds a favoured application in two-band filtering, for example for producing two-band and two-polarisation duplexers. <IMAGE>

IPC 1-7

**H01P 1/17**; **H01P 1/161**; **H01P 1/213**; **H01P 1/207**

IPC 8 full level

**H01P 1/16** (2006.01); **H01P 1/161** (2006.01); **H01P 1/17** (2006.01); **H01P 1/213** (2006.01)

CPC (source: EP US)

**H01P 1/161** (2013.01 - EP US); **H01P 1/17** (2013.01 - EP US); **H01P 1/2131** (2013.01 - EP US)

Cited by

CN115377638A

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

**EP 0520919 A1 19921230**; **EP 0520919 B1 19960612**; DE 69211428 D1 19960718; DE 69211428 T2 19970213; FR 2678434 A1 19921231; FR 2678434 B1 19940204; JP H05235605 A 19930910; US 5309128 A 19940503

DOCDB simple family (application)

**EP 92460018 A 19920624**; DE 69211428 T 19920624; FR 9108137 A 19910626; JP 18887492 A 19920624; US 90434892 A 19920625