

Title (en)

Antenna having a monopole design for use in several wireless communication services

Title (de)

Antenne mit Monopolcharakter für mehrere Funkdienste

Title (fr)

Antenne avec une forme monopole pour multiples radio services

Publication

**EP 1445828 B1 20170927 (DE)**

Application

**EP 04002304 A 20040203**

Priority

DE 10304909 A 20030206

Abstract (en)

[origin: EP1445828A2] The antenna consists of a monopole element (10) essentially implemented along a straight line with an essentially planar top capacitance (1) whose surface normal (12) is in the straight line direction and is connected to the monopole element. The top capacitance is essentially rotation symmetrical and formed by planar ring structures (2) separated by annular gaps (3).

IPC 8 full level

**H01Q 9/36** (2006.01); **H01Q 5/00** (2006.01); **H01Q 5/10** (2015.01); **H01Q 5/321** (2015.01); **H04B 7/08** (2006.01)

CPC (source: EP US)

**H01Q 5/321** (2015.01 - EP US); **H01Q 9/36** (2013.01 - EP US)

Cited by

DE102013219377A1; EP1610413A1; US8004465B2; WO2016042061A1; WO2007057300A1; US7391374B2; US7158086B2; EP2693565A1; DE102012014913A1; EP2854215A1; US10305191B2

Designated contracting state (EPC)

DE ES FR GB IT SE

DOCDB simple family (publication)

**EP 1445828 A2 20040811**; **EP 1445828 A3 20070502**; **EP 1445828 B1 20170927**; **EP 1445828 B8 20171101**; DE 10304909 A1 20040819; DE 10304909 B4 20141009; US 2004160373 A1 20040819; US 6956533 B2 20051018

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**EP 04002304 A 20040203**; DE 10304909 A 20030206; US 77373604 A 20040206