

Title (en)

A printed built-in antenna for use in a portable electronic communication apparatus

Title (de)

Gedrückte, eingebaute Antenne für ein tragbares elektronisches Kommunikationsgerät

Title (fr)

Antenne imprimée et incorporée dans un appareil de communication électronique portable

Publication

**EP 1359638 B1 20050706 (EN)**

Application

**EP 02009863 A 20020502**

Priority

EP 02009863 A 20020502

Abstract (en)

[origin: EP1359638A1] An antenna for use in a portable electronic communication apparatus has a pattern of a conductive material. The pattern of conductive material is printed on the Printed Circuit Board (PCB) (7), comprising the RF circuitry of the portable electronic communication apparatus, to which the antenna pattern is connected. The pattern comprises a first and second antenna arm, which together form a PIFA antenna and are resonating in a first and second frequency band, respectively. As an alternative, the antenna pattern forms a multi-port antenna having separate antenna arms for Rx and Tx, respectively. <IMAGE>

IPC 1-7

**H01Q 1/24**; **H01Q 9/04**; **H01Q 5/00**

IPC 8 full level

**H01Q 1/24** (2006.01); **H01Q 5/00** (2006.01); **H01Q 5/371** (2015.01); **H01Q 5/378** (2015.01); **H01Q 5/40** (2015.01); **H01Q 9/04** (2006.01)

CPC (source: EP)

**H01Q 1/243** (2013.01); **H01Q 5/371** (2015.01); **H01Q 5/378** (2015.01); **H01Q 5/40** (2015.01); **H01Q 9/0421** (2013.01)

Cited by

WO2008122317A1; EP1670093A1; US7808437B2; WO2006061352A1; US7639188B2; KR100693309B1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**EP 1359638 A1 20031105**; **EP 1359638 B1 20050706**; AT E299298 T1 20050715; DE 60204943 D1 20050811; DE 60204943 T2 20060420

DOCDB simple family (application)

**EP 02009863 A 20020502**; AT 02009863 T 20020502; DE 60204943 T 20020502