

Title (en)
MULTIBAND LOOP ANTENNA

Title (de)
MEHRBAND-LOOP-ANTENNE

Title (fr)
ANTENNE CADRE MULTIBANDE

Publication
EP 4189774 A1 20230607 (DE)

Application
EP 21743140 A 20210708

Priority

- DE 102020209545 A 20200729
- EP 2021068996 W 20210708

Abstract (en)
[origin: WO2022022976A1] The invention describes a multiband loop antenna (100) which comprises a first, electrically conductive, L-shaped partial structure (110) on a first layer (151) of a printed circuit board (150). The first partial structure (110) has a first resonant frequency and a feed point (107) of the antenna (100). The multiband loop antenna (100) comprises a second, electrically conductive, L-shaped partial structure (120) on the first layer (151) of the printed circuit board (150), the second partial structure (120) being designed for a second resonant frequency. The first partial structure (110) and the second partial structure (120) are capacitively coupled to one another in a coupling region (109). Furthermore, the multiband loop antenna (100) comprises an electrically conductive first reference region (105). The first partial structure (110) and the second partial structure (120) are arranged on the first layer (151) of the printed circuit board (150) in such a way that they form a loop (109) together with the first reference region (105).

IPC 8 full level
H01Q 9/42 (2006.01); **H01Q 1/22** (2006.01); **H01Q 1/38** (2006.01); **H01Q 5/321** (2015.01); **H01Q 5/357** (2015.01); **H01Q 5/378** (2015.01);
H01Q 7/00 (2006.01)

CPC (source: EP US)
H01Q 1/22 (2013.01 - EP US); **H01Q 1/38** (2013.01 - EP); **H01Q 5/321** (2015.01 - EP US); **H01Q 5/357** (2015.01 - EP US);
H01Q 5/378 (2013.01 - EP US); **H01Q 7/00** (2013.01 - EP US); **H01Q 9/42** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
DE 102020209545 A1 20220203; CN 115917877 A 20230404; EP 4189774 A1 20230607; US 2023246333 A1 20230803;
WO 2022022976 A1 20220203

DOCDB simple family (application)
DE 102020209545 A 20200729; CN 202180049953 A 20210708; EP 2021068996 W 20210708; EP 21743140 A 20210708;
US 202118011933 A 20210708