

Title (en)

A COMPACT, WIDEBAND, MULTIPLE INPUT HYBRID SLOT ANTENNA WITH IMPROVED DIVERSITY

Title (de)

KOMPAKTE, BREITBANDIGE, HYBRIDE SCHLITZANTENNE MIT MEHREREN EINGÄNGEN MIT VERBESSERTER DIVERSITÄT

Title (fr)

ANTENNE HYBRIDE À FENTE COMPACTE, À LARGE BANDE, À ENTRÉES MULTIPLES ET À DIVERSITÉ AMÉLIORÉE

Publication

EP 3512041 A1 20190717 (EN)

Application

EP 18305023 A 20180112

Priority

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Abstract (en)

A novel antenna topology with multiple inputs on a hybrid slot-type antenna radiating element is realized on two layers of a printed circuit board using multiple feeders connected to a central conductive surface on a first layer and multiple slots connected to a central non-conductive surface on a second layer, the central surfaces having similar shapes but different sizes to create an interval that behaves as a slot antenna by radiating electromagnetic waves. To increase the decorrelation between the multiple directional radiation patterns corresponding to the different inputs the antenna uses a main printed circuit board as part of the antenna design to improve the decorrelation and the multiple inputs locations and multiple slot shapes are chosen in this objective. The antenna is adapted to be integrated directly in a receiver for the reception of broadcast television such as ATSC but can also be integrated into an indoor device connected to a television receiver. In this case, the indoor device would not require any installation nor particular positioning.

IPC 8 full level

H01Q 13/10 (2006.01); **H01Q 1/38** (2006.01); **H01Q 1/48** (2006.01)

CPC (source: EP)

H01Q 1/38 (2013.01); **H01Q 1/48** (2013.01); **H01Q 13/10** (2013.01)

Citation (applicant)

NGUYEN, A COMPACT PRINTED 4X4 MIMO-UWB ANTENNA WITH WLAN BAND REJECTION

Citation (search report)

- [A] JP S51101447 A 19760907 - TOKYO SHIBAURA ELECTRIC CO, et al
- [A] EP 3168930 A1 20170517 - HUAWEI TECH CO LTD [CN]
- [A] CHEN CHUNHONG ET AL: "Wideband and Low-Cross-Polarization Planar Annual Ring Slot Antenna", IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, vol. 16, 29 September 2017 (2017-09-29), pages 3009 - 3013, XP011672862, ISSN: 1536-1225, [retrieved on 20171107], DOI: 10.1109/LAWP.2017.2757963

Cited by

CN110783684A; CN111710971A

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

DOCDB simple family (publication)

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DOCDB simple family (application)

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