

Title (en)
MONOPOLAR WIRE-PLATE ANTENNA RECONFIGURABLE IN FREQUENCY

Title (de)
FREQUENZ-REKONFIGURIERBARE MONOPOLARE DRAHT-PLATTENANTENNE

Title (fr)
ANTENNE FIL-PLAQUE MONOPOLAIRE RECONFIGURABLE EN FRÉQUENCE

Publication
EP 3879627 A1 20210915 (FR)

Application
EP 21161201 A 20210308

Priority
FR 2002363 A 20200310

Abstract (en)
[origin: US2021288409A1] A monopole wire-plate antenna that is reconfigurable in a frequency range of operation, comprising: a ground plane (1); a capacitive roof (2); a probe feed (3), which is electrically insulated from the ground plane (1), and which extends between the ground plane (1) and the capacitive roof (2) so as to electrically feed the capacitive roof (2); at least one shorting wire (4), which is arranged to electrically connect the capacitive roof (2) to the ground plane (1), and which is coated in a magneto-dielectric material (5) having a complex magnetic permeability, which varies as a function of a static magnetic field applied to the magneto-dielectric material (5).

Abstract (fr)
Antenne fil-plaque monopolaire reconfigurable dans une gamme de fréquences de fonctionnement, comportant :- un plan de masse (1) ; - un toit capacitif (2) ; - une sonde d'alimentation (3), électriquement isolée du plan de masse (1), et s'étendant entre le plan de masse (1) et le toit capacitif (2) de manière à alimenter électriquement le toit capacitif (2) ; - au moins un fil de court-circuit (4), agencé pour connecter électriquement le toit capacitif (2) au plan de masse (1), et enrobé d'un matériau magnéto-diélectrique (5) présentant une perméabilité magnétique complexe, variable en fonction d'un champ magnétique statique appliqué au matériau magnéto-diélectrique (5).

IPC 8 full level
H01Q 1/48 (2006.01); **H01Q 9/04** (2006.01); **H01Q 9/14** (2006.01); **H01Q 9/36** (2006.01)

CPC (source: EP US)
H01Q 1/48 (2013.01 - EP US); **H01Q 9/0421** (2013.01 - EP); **H01Q 9/145** (2013.01 - EP); **H01Q 9/36** (2013.01 - EP); **H01Q 9/40** (2013.01 - US)

Citation (applicant)
L. BATEL ET AL.: "Design of a monopolar wire-plate antenna loaded with magneto-dielectric material", CONFÉRENCE EUCAP (EUROPEAN CONFERENCE ON ANTENNAS AND PROPAGATION), April 2018 (2018-04-01)

Citation (search report)
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• [Y] RONGAS DIMITRIOS K ET AL: "Towards 600 MHz LTE smartphones via tunable magnetodielectric Printed Inverted-F Antennas", 2017 INTERNATIONAL WORKSHOP ON ANTENNA TECHNOLOGY: SMALL ANTENNAS, INNOVATIVE STRUCTURES, AND APPLICATIONS (IWAT), IEEE, 1 March 2017 (2017-03-01), pages 111 - 114, XP033090567, DOI: 10.1109/IWAT.2017.7915331
• [A] WU XU ET AL: "A Novel Compact Microstrip Antenna Embedded with Magneto-Dielectric Ferrite Materials For 433 MHz Band Applications", 2019 13TH EUROPEAN CONFERENCE ON ANTENNAS AND PROPAGATION (EUCAP), EUROPEAN ASSOCIATION ON ANTENNAS AND PROPAGATION, 31 March 2019 (2019-03-31), pages 1 - 4, XP033562218
• [A] CANNEVA F ET AL: "Miniature reconfigurable antenna with magneto dielectric substrate for DVB-H band", ANTENNAS AND PROPAGATION (EUCAP), PROCEEDINGS OF THE 5TH EUROPEAN CONFERENCE ON, IEEE, 11 April 2011 (2011-04-11), pages 2289 - 2292, XP031877746, ISBN: 978-1-4577-0250-1

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

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EP 3879627 A1 20210915; FR 3108209 A1 20210917; FR 3108209 B1 20220225; US 11532888 B2 20221220; US 2021288409 A1 20210916

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