

Title (en)  
MONOPOLAR WIRE-PLATE ANTENNA

Title (de)  
MONOPOLARE DRAHT-PLATTENANTENNE

Title (fr)  
ANTENNE FIL-PLAQUE MONOPOLAIRE

Publication  
**EP 3671953 A1 20200624 (FR)**

Application  
**EP 19217247 A 20191217**

Priority  
FR 1873167 A 20181218

Abstract (en)  
[origin: US2020203838A1] This antenna includes: a ground plane; a capacitive roof, parallel with the ground plane; a supply probe, which is electrically isolated from the ground plane and runs between the ground plane and the capacitive roof so as to supply the capacitive roof with electricity, the supply probe being intended to be connected to a transmission line; a set of shorting wires, which are arranged in parallel around the supply probe such that each shorting wire electrically connects the capacitive roof to the ground plane, each shorting wire being coated with a magneto-dielectric material.

Abstract (fr)  
Cette antenne comporte :- un plan de masse (1) ;- un toit capacitif (2), s'étendant parallèlement au plan de masse (1) ;- une sonde d'alimentation (3, 30), 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), la sonde d'alimentation (3, 30) étant destinée à être connectée à une ligne de transmission ;- un ensemble de fils de court-circuit (4), agencés parallèlement autour de la sonde d'alimentation (3, 30) de sorte que chaque fil de court-circuit (4) connecte électriquement le toit capacitif (2) au plan de masse (1), chaque fil de court-circuit (4) étant enrobé d'un matériau magnéto-diélectrique (5).

IPC 8 full level  
**H01Q 1/48** (2006.01); **H01Q 1/52** (2006.01); **H01Q 9/04** (2006.01); **H01Q 9/36** (2006.01)

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

Citation (applicant)  
• L. BATEL ET AL.: "Design of a monopolar wire-plate antenna loaded with magneto-dielectric material", CONFÉRENCE EUCAP (EUROPEAN CONFÉRENCE ON ANTENNAS AND PROPAGATION), April 2018 (2018-04-01)  
• E.A. WOLFF: "Antenna analysis", 1966, WILEY  
• C. HARRISON ET AL.: "Folded dipoles and loops", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, vol. 9, no. 2, 1961, pages 171 - 187, XP011220923

Citation (search report)  
• [XY] L. BATEL ET AL.: "Design of a Monopolar Wire-plate Antenna Loaded with Magneto-Dielectric Material", 12TH EUROPEAN CONFERENCE ON ANTENNAS AND PROPAGATION (EUCAP 2018), 13 April 2018 (2018-04-13), Stevenage, UK, XP055626159, ISBN: 978-1-78561-816-1, DOI: 10.1049/cp.2018.1021  
• [YA] DELAVEAUD CH ET AL.: "New kind of microstrip antenna: the monopolar wire-patch antenna", ELECTRONICS LETTERS, IEE STEVENAGE, GB, vol. 30, no. 1, 6 January 1994 (1994-01-06), pages 1 - 2, XP006000050, ISSN: 0013-5194, DOI: 10.1049/EL:19940057  
• [A] JUHUA LIU ET AL.: "Design and Analysis of a Low-Profile and Broadband Microstrip Monopolar Patch Antenna", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 61, no. 1, 23 August 2012 (2012-08-23), pages 11 - 18, XP011484563, ISSN: 0018-926X, DOI: 10.1109/TAP.2012.2214996  
• [A] LAU K L ET AL.: "A Wide-Band Monopolar Wire-Patch Antenna for Indoor Base Station Applications", IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, IEEE, PISCATAWAY, NJ, US, vol. 4, no. 1, 20 June 2005 (2005-06-20), pages 155 - 157, XP011131375, ISSN: 1536-1225, DOI: 10.1109/LAWP.2005.847432

Cited by  
FR3125886A1; WO2023006506A1

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)  
**EP 3671953 A1 20200624**; FR 3090220 A1 20200619; FR 3090220 B1 20210115; US 11158947 B2 20211026; US 2020203838 A1 20200625

DOCDB simple family (application)  
**EP 19217247 A 20191217**; FR 1873167 A 20181218; US 201916718521 A 20191218