

Title (en)
RADIATING ELEMENT WITH CIRCULAR POLARISATION IMPLEMENTING A RESONANCE IN A FABRY-PEROT CAVITY

Title (de)
STRAHLUNGSELEMENT MIT KREISPOLARISIERUNG, BEI DEM EINE RESONANZ IN EINEM FABRY-PEROT-INTERFEROMETER ANGEWANDT WIRD

Title (fr)
ELEMENT RAYONNANT A POLARISATION CIRCULAIRE METTANT EN OEUVRE UNE RESONANCE DANS UNE CAVITE DE FABRY PEROT

Publication
EP 3547450 B1 20211027 (FR)

Application
EP 19165394 A 20190327

Priority
FR 1800260 A 20180329

Abstract (en)
[origin: CA3038392A1] Circularly polarized radiating element comprising at least one excitation aperture (OE) for a wave that is linearly polarized with what is referred to as an excitation first polarization (Ex), a frequency selective surface (S2) and a metasurface (S1) comprising a two-dimensional and periodic array of metasurface cells (MS), the excitation aperture (OE) opening onto the metasurface (S1), the metasurface cells (MS) all being oriented identically with respect to the excitation polarization (Ex) and configured to: - reflect an incident wave (Eix) having the excitation polarization (Ex) in order to form a reflected wave (Er1x) polarized with the excitation polarization (Ex), and - depolarize and reflect the incident wave (Eix) in order to form a reflected wave (Er1y) polarized with the orthogonal polarization (Ey), having a phase difference substantially equal to 900 with respect to the reflected wave (Er1x) polarized with the excitation polarization (Ex), and having an amplitude substantially equal to the amplitude of a wave (E'tx) radiated by the frequency selective surface (S2), generated from the reflected wave (Er1x) polarized with the excitation polarization (Ex).

IPC 8 full level
H01Q 15/00 (2006.01); **H01Q 15/24** (2006.01)

CPC (source: EP US)
H01Q 5/28 (2015.01 - US); **H01Q 15/0013** (2013.01 - EP US); **H01Q 15/0026** (2013.01 - EP US); **H01Q 15/24** (2013.01 - US); **H01Q 15/244** (2013.01 - EP US); **H01Q 19/104** (2013.01 - US)

Cited by
CN115810892A; CN111129782A; CN112117545A; CN114824834A; CN110808461A

Designated contracting state (EPC)
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DOCDB simple family (publication)
EP 3547450 A1 20191002; **EP 3547450 B1 20211027**; CA 3038392 A1 20190929; ES 2902431 T3 20220328; FR 3079678 A1 20191004; FR 3079678 B1 20200417; US 11217896 B2 20220104; US 2019305436 A1 20191003; WO 2020109676 A2 20200604

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