

Title (en)
AUTOMOBILE WINDOW GLASS

Title (de)
AUTOFENSTERGLAS

Title (fr)
VITRE DE FENÊTRE DE VÉHICULE AUTOMOBILE

Publication
EP 3570369 A1 20191120 (EN)

Application
EP 18739175 A 20180111

Priority
• JP 2017002945 A 20170111
• JP 2018000467 W 20180111

Abstract (en)

A vehicle window glass according to the present invention includes a glass plate, a defogger formed on the glass plate and having a pair of bus bars and a plurality of horizontal heating wires that join the pair of bus bars, at least one vertical element provided in the defogger and intersecting at least one of the horizontal heating wires, and a first antenna element formed on the glass plate and capacitively coupled to the defogger, the first antenna element being configured to receive broadcast waves having a frequency range of wavelengths $\lambda_{<\sub>1</sub>}$ to $\lambda_{<\sub>2</sub>}$ that is higher than an FM frequency range, and $P_{min} < \alpha \cdot \lambda_{<\sub>1</sub>} / 2$ being satisfied, where P_{min} is a smallest distance, out of the distance between one of the bus bars and the vertical element and the distance between the vertical antennas, and α is the shortening coefficient of wavelength of the glass plate.

IPC 8 full level
H01Q 1/32 (2006.01); **H01Q 1/22** (2006.01)

CPC (source: CN EP)
H01Q 1/1278 (2013.01 - CN EP); **H01Q 1/32** (2013.01 - CN EP); **H01Q 5/364** (2015.01 - CN 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

DOCDB simple family (publication)
EP 3570369 A1 20191120; EP 3570369 A4 20200902; CN 110168806 A 20190823; CN 114421126 A 20220429; JP 2018113591 A 20180719;
JP 6879744 B2 20210602; WO 2018131645 A1 20180719

DOCDB simple family (application)
EP 18739175 A 20180111; CN 201880006569 A 20180111; CN 202210066629 A 20180111; JP 2017002945 A 20170111;
JP 2018000467 W 20180111