

Title (en)
WINDOW GLASS FOR AUTOMOBILE

Title (de)
FENSTERGLAS FÜR EIN AUTO

Title (fr)
VERRE DE FENÊTRE POUR AUTOMOBILE

Publication
EP 2299538 A1 20110323 (EN)

Application
EP 09770003 A 20090605

Priority
• JP 2009060372 W 20090605
• JP 2008167102 A 20080626

Abstract (en)
Window glass for vehicles by which a highly-sensitive DTV antenna can be obtained even if an AM antenna is installed under the DTV antenna and the sensitivity of the AM antenna can be secured is provided. The heating wire pattern of a defogger (14) is a shape having a convex heating wire pattern portion (30) being raised in a middle part toward a metal part (24) of a vehicle roof, and a non-heat generating area is provided on both sides of the convex heating wire pattern portion. DTV antennas (32a, 32b) are disposed on the upper portion of the space and near the metal part of the vehicle roof, a part of an element of the AM antenna is disposed in the non-heat generating area while keeping a distance relative to the DTV antenna, and an FM antenna is disposed along the convex heating wire pattern portion in the non-heat generating area.

IPC 8 full level
H01Q 1/32 (2006.01)

CPC (source: EP)
H01Q 1/1278 (2013.01)

Citation (search report)
See references of WO 2009157293A1

Cited by
EP2913889A4; US10686245B2; US10985438B2; US9986601B2

Designated contracting state (EPC)
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 SE SI SK TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2299538 A1 20110323; CN 102067379 A 20110518; JP 2010011005 A 20100114; JP 5213544 B2 20130619; WO 2009157293 A1 20091230

DOCDB simple family (application)
EP 09770003 A 20090605; CN 200980123268 A 20090605; JP 2008167102 A 20080626; JP 2009060372 W 20090605