

Title (en)
Antenna module

Title (de)
Antennenmodul

Title (fr)
Module d'antenne

Publication
EP 1619752 B1 20140402 (DE)

Application
EP 05015079 A 20050712

Priority
DE 102004035064 A 20040720

Abstract (en)
[origin: EP1619752A1] An antenna module for GHz-frequencies has a lower patch antenna (10) with a lower substrate (11) made of a dielectric material, a lower lambda/2-structure form of the lower substrate (11), and a lower metallization (13) formed on the bottom face of the lower substrate (11). An upper lambda/2-structure is formed on the upper face of the upper substrate (21) for satellite GHz-range reception, and a lower antenna tap (14) from the lower lambda/2 antenna structure is provided through the lower substrate (11).

IPC 8 full level
H01Q 1/32 (2006.01); **H01Q 5/00** (2006.01); **H01Q 5/40** (2015.01); **H01Q 9/04** (2006.01); **H01Q 21/28** (2006.01)

CPC (source: EP US)
H01Q 1/3275 (2013.01 - EP US); **H01Q 5/40** (2015.01 - EP US); **H01Q 9/0407** (2013.01 - EP US); **H01Q 9/0414** (2013.01 - EP US);
H01Q 21/28 (2013.01 - EP US)

Citation (examination)
• US 6087990 A 20000711 - THILL KEVIN M [US], et al
• EP 0521384 A1 19930107 - BALL CORP [US]
• JAMES J R; HALL P S: "Handbook of microstrip antennas, PASSAGE", 1 January 1989 (1989-01-01), PETER PEREGRINUS LTD, LONDON, GB, pages 318 - 319, XP002266113

Cited by
WO2009133523A1; KR101540223B1; CN103403961A; EP1936736A1; US7587183B2; US7936306B2; US7928909B2; WO2009065806A1; WO2012123125A1; US9553365B2; US7277056B1; US7528780B2; US7405700B2; US9093750B2; US9270019B2; WO2010031459A1; US8111196B2; US7489280B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1619752 A1 20060125; EP 1619752 B1 20140402; DE 102004035064 A1 20060216; US 2006220970 A1 20061005;
US 2006273969 A1 20061207; US 2007210967 A1 20070913; US 7295167 B2 20071113; US 7489280 B2 20090210

DOCDB simple family (application)
EP 05015079 A 20050712; DE 102004035064 A 20040720; US 18501505 A 20050720; US 49453306 A 20060728; US 75353907 A 20070524