

Title (en)
Antenna apparatus in wireless terminals

Title (de)
Antenne in drahtlosen Terminals

Title (fr)
Antenne dans terminaux sans fils

Publication
EP 0851530 A3 20000726 (EN)

Application
EP 97309712 A 19971202

Priority
US 78197096 A 19961228

Abstract (en)
[origin: EP0851530A2] A wireless terminal comprising a housing (102) that comprises an enclosed conductive element (200) that contains a radio has one or more openings (120) is used to provide both electromagnetic shielding and an integrated antenna. The openings (120) are excited to resonate, thereby forming a slot antenna for the radio Multiple openings can be used to provide antenna diversity. <IMAGE>

IPC 1-7
H01Q 1/24; **H01Q 1/52**; **H01Q 13/10**

IPC 8 full level
H01Q 1/24 (2006.01); **H01Q 1/52** (2006.01); **H01Q 13/10** (2006.01); **H04B 1/38** (2006.01)

CPC (source: EP)
H01Q 1/243 (2013.01); **H01Q 1/526** (2013.01); **H01Q 13/16** (2013.01)

Citation (search report)

- [XY] US 4975711 A 19901204 - LEE KANG-HOON [KR]
- [X] EP 0669672 A1 19950830 - ASCOM BUSINESS SYSTEMS AG [CH]
- [X] US 4410890 A 19831018 - DAVIS STEVAN A [US], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 011, no. 212 (E - 522) 9 July 1987 (1987-07-09)
- [X] IK GUEN CHOI ET AL: "UHF TAPERED BENT-SLOT ANTENNA FOR SMALL SIZE PORTABLE PHONE", PROCEEDINGS OF THE VEHICULAR TECHNOLOGY SOCIETY CONFERENCE (VTSC),US,NEW YORK, IEEE, vol. CONF. 42, 1992, pages 9 - 12, XP000339671, ISBN: 0-7803-0673-2
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 10 30 November 1995 (1995-11-30)
- [DA] KUBOYAMA H. ; FUJIMOTO K. ; HIRASAWA K.: "UHF BENT-SLOT ANTENNA SYSTEM FOR PORTABLE EQUIPMENT. I", IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol. vt36, no. 2, 1987, USA, pages 78 - 85, XP000907067

Cited by
EP2109185A1; WO03052867A1; GB2434697B; FR2980309A1; CN104009284A; EP1858112A1; EP1560291A1; EP1418642A3; US2013257662A1; US9882284B2; GB2434697A; GB2363294A; GB2344201A; EP3293824A1; EP3293822A1; US9761951B2; US9722308B2; US7161548B2; US9917346B2; US7391378B2; US9979078B2; WO2009126423A1; WO2012159618A1; WO0062432A1; WO2013041511A1; WO2007136321A1; US8207897B2; US9973228B2; US9735461B2; US9906260B2; US6282433B1; US9673507B2; US10069209B2; US7389129B2; US7864123B2; US9647338B2; US9680212B2; US7327324B2; US8094079B2; US8907850B2; US9634383B2; US9948002B2; US10079428B2; US8106836B2; US8350761B2; US8410986B2; US8872708B2; US8994597B2

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DOCDB simple family (application)
EP 97309712 A 19971202; JP 35439597 A 19971224; KR 19970075771 A 19971227