

Title (en)

PATCH ANTENNA FOR OPERATING IN AT LEAST TWO FREQUENCY RANGES

Title (de)

PATCH-ANTENNE FÜR DEN BETRIEB IN MINDESTENS ZWEI FREQUENZBEREICHEN

Title (fr)

ANTENNE A PLAQUE, CONÇUE POUR FONCTIONNER DANS AU MOINS DEUX GAMMES DE FREQUENCES

Publication

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Application

**EP 01986872 A 20011213**

Priority

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- EP 0114688 W 20011213

Abstract (en)

[origin: US6861988B2] An improved patch antenna for operation in at least two frequency bands is distinguished by the following features:having a reflector (1),at least two patch antenna element arrangements (5, 7) are provided, constructed on the reflector (1) and/or arranged in front of the reflector (1), namely a patch antenna element arrangement (5) for a lower frequency band and a patch antenna element arrangement (7) for a higher frequency band,the patch antenna element arrangements (5, 7) for the lower frequency band and for the higher frequency band each have at least one active feed patch (5a, 7a) with an associated slot structure (11, 13) and a passive cover patch (5b, 7b), which is arranged above it and is capacitively coupled,the patch antenna element arrangements (5, 7) for the lower frequency band and for the higher frequency band located on a base plate,the top cover patch (5b) of the lower patch antenna element arrangement (5) for the lower frequency band in this case at the same time forms the base plate for a patch antenna element arrangement (7), which is constructed on it, for the higher frequency band,a slot arrangement which has an H-shaped slot structure (11, 13) is formed in at least one feed patch (5a, 7a), andthe at least two slot structures (11, 13) in the respective feed patch (5a, 7a) are fed via a respectively associated feed cable arrangement (15a, 15b).

IPC 1-7

**H01Q 9/04; H01Q 5/00**

IPC 8 full level

**H01Q 5/00** (2006.01); **H01Q 5/378** (2015.01); **H01Q 5/40** (2015.01); **H01Q 9/04** (2006.01)

CPC (source: EP KR US)

**H01Q 5/378** (2013.01 - EP US); **H01Q 5/40** (2015.01 - EP US); **H01Q 9/0414** (2013.01 - EP US); **H01Q 9/0457** (2013.01 - EP US); **H01Q 13/08** (2013.01 - KR)

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- WO 0013260 A1 20000309 - ERICSSON TELEFON AB L M [SE]
- EP 0433255 A2 19910619 - COMMUNICATIONS SATELLITE CORP [US]

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**WO 0250940 A2 20020627; WO 0250940 A3 20020829**; AT E289452 T1 20050315; AU 3842802 A 20020701; BR 0116400 A 20031111; CN 1249853 C 20060405; CN 1483230 A 20040317; DE 10064128 A1 20020725; DE 50105395 D1 20050324; EP 1346434 A2 20030924; EP 1346434 B1 20050216; ES 2236336 T3 20050716; KR 100912170 B1 20090814; KR 20030064792 A 20030802; US 2004027292 A1 20040212; US 6861988 B2 20050301

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