Title (en)

Multi-band planar inverted-F antenna

Title (de)

Planare mehrbandige PIFA-Antennenanordnung

Title (fr)

Antenne planaire multibande de type PIFA

Publication

EP 2026407 A1 20090218 (EN)

Application

EP 07253190 A 20070814

Priority

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Abstract (en)

A multi-band planar inverted-F antenna includes a radiating unit (2), a ground unit (1) and a feeding unit (3). The radiating unit (2) includes a common radiating element (21), a high-frequency (HF) radiating element (22) and a low-frequency (LF) radiating element (23). A quasi U-shaped slot (233) is defined between the HF radiating element (22) and the LF radiating element (23). The ground unit (1) is electrically connected to one side of the common radiating element (21). The feeding unit (3) includes a strip (31) electrically connected to one side of the HF radiating element (22). The ground unit (1) includes a ground point (11) and an inverted-L short-line (12) connected to the ground point (11) at one end thereof. The inverted-L short-line (12) is also electrically connected to the common radiating element (21) at another end thereof. A loop surface current induced by the inverted-L short-line (12) can advantageously enhance bandwidth of the multi-band planar inverted-F antenna at frequencies of interest.

IPC 8 full level

H01Q 1/24 (2006.01); **H01Q 1/36** (2006.01); **H01Q 9/04** (2006.01)

CPC (source: EP)

H01Q 1/243 (2013.01); **H01Q 1/36** (2013.01); **H01Q 9/0421** (2013.01); **H01Q 9/0442** (2013.01)

Citation (search report)

- [X] US 2006139218 A1 20060629 - JANG CHANG-WON [KR]
- [A] US 2004066334 A1 20040408 - FANG CHIEN-HSING [TW], et al
- [A] WO 03103088 A1 20031211 - SAGEM [FR]
- [A] WO 2004059785 A2 20040715 - NOKIA CORP [FI], et al
- [A] US 2007115189 A1 20070524 - WEN GEYI [CA], et al
- [A] WO 2004038857 A1 20040506 - NOKIA CORP [FI], et al

Cited by

EP2410607A1; WO2015085554A1; US8497806B2; US8648751B2

Designated contracting state (EPC)

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