

Title (en)

Method for receiving radio frequency signals by the ground chassis of a mobile communications device

Title (de)

Verfahren um RF-Signale mit den Masseteilen des Gehäuses eines Mobilkommunikationsgeräts zu empfangen.

Title (fr)

Méthode pour recevoir des signaux radiofréquences grace à la masse du boîtier d'un dispositif de communication mobile.

Publication

EP 2182580 A1 20100505 (EN)

Application

EP 08168223 A 20081103

Priority

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Abstract (en)

BLUESKY POSITIONING IPCo SARL A coupling system between a ground chassis of a mobile communications device (30) used as an antenna and a radio frequency (RF) receiver housed on a printed circuit board (PCB) card of the mobile communications device (30) is described. The ground chassis can include the PCB ground. The coupling system comprises a main coupling leg (14) implemented as a galvanic connection between the PCB card (12) and the antenna. A reference capacitive coupling leg (16) is also formed between a ground plane of the PCB card (12) and the antenna. An auxiliary capacitive coupling leg (18) is further formed between a separate conductive area of the PCB card (12) and the antenna. The coupling system includes a delay line (4) arranged to introduce a phase shift of the signal captured through the auxiliary capacitive coupling leg (18). The system is arranged so that the RF receiver (20) is provided with the signal captured by the galvanic main coupling leg (14) and with the phase shifted signal delivered by the auxiliary coupling leg via the delay line (4). The coupling system allows a RF receiver of a mobile communications device (30) system to receive the signals transmitted by the space vehicles of a global positioning system through an antenna of the mobile device, said antenna being for instance constituted by a chassis of the mobile communications device.

IPC 8 full level

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CPC (source: EP)

H01Q 1/243 (2013.01); **H01Q 1/44** (2013.01)

Citation (applicant)

EP 1777781 A1 20070425 - SAVOLAINEN RISTO KALEVI [FR]

Citation (search report)

- [DA] EP 1777781 A1 20070425 - SAVOLAINEN RISTO KALEVI [FR]
- [A] US 2007252764 A1 20071101 - KESKI-OPAS PETRI [FI]
- [A] EP 1267441 A2 20021218 - HITACHI METALS LTD [JP]
- [A] US 5940045 A 19990817 - BELCHER DONALD K [US], et al

Designated contracting state (EPC)

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Designated extension state (EPC)

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DOCDB simple family (publication)

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