

Title (en)
Antenna tuning for multiband operation

Title (de)
Antennenfrequenzabstimmung für Mehrbandbetrieb

Title (fr)
Réglage d'antenne pour fonctionnement multibande

Publication
EP 2688144 A1 20140122 (EN)

Application
EP 12176789 A 20120717

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Abstract (en)
A system and process that incorporates teachings of the subject disclosure may include, for example, a multiband antenna (1500) as may be used in mobile communications devices. The multiband antenna includes a common feed port (1502a) coupled to each of a first radiating portion (1510) and a second radiating portion (1520). Each of the first and second radiating portions defines a respective resonant bandwidth. The multiband antenna also includes at least one adjustable tuning circuit (1514) disposed between physically isolated radiating segments (1512a,1512b) of a respective one of the first and second radiating portions. Adjustment of the tuning circuit alters a corresponding resonant bandwidth allowing the corresponding resonant bandwidth to be tuned independently of the other resonant bandwidth and without affecting performance of the other resonant bandwidth. In at least some embodiments, the tuning circuit can include a tunable phase shifter having one or more components, each having a variable reactance. Other embodiments are disclosed.

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Citation (search report)
• [X] US 2007035458 A1 20070215 - OHBA ISAO [JP]
• [A] US 2011183633 A1 20110728 - OHBA ISAO [JP], et al
• [A] EP 2328233 A2 20110601 - FUJITSU LTD [JP]

Cited by
CN112467338A; EP3358673A1; CN112993573A; WO2022166948A1; US10312582B2; US10637138B2; US10797387B2; US11211698B2

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