

Title (en)
Ferroelectric slot antenna

Title (de)
Ferroelektrische Schlitzantenne

Title (fr)
Antenne à fentes ferroélectrique

Publication
EP 1753084 A2 20070214 (EN)

Application
EP 06123190 A 20020404

Priority

- EP 02718438 A 20020404
- US 28309301 P 20010411
- US 90463101 A 20010713
- US 91275301 A 20010724
- US 92773201 A 20010808
- US 92713601 A 20010810

Abstract (en)
A family of FE dielectric-tuned slot antennas and a method for frequency tuning a wireless communications antenna are provided. The method comprises: forming a radiator (504); forming a dielectric with ferroelectric material proximate to the radiator (506) forming a counterpoise (502); forming a slot (508); applying a voltage to the ferroelectric material; in response to applying the voltage, generating a dielectric constant; and, in response to the dielectric constant, communicating electromagnetic fields at a resonant frequency. Some aspects of the method further comprise: varying the applied voltage; and, modifying the resonant frequency in response to changes in the applied voltage. Modifying the resonant frequency includes forming an antenna with a variable operating frequency responsive to the applied voltage. Alternately stated, forming an antenna with a variable operating frequency includes forming an antenna with a predetermined fixed characteristic impedance, independent of the resonant frequency.

IPC 8 full level
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CPC (source: EP)
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Citation (applicant)

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- US 5583524 A 19961210 - MILROY WILLIAM W [US]
- WO 0079645 A1 20001228 - ERICSSON TELEFON AB L M [SE]
- DE 1230468 B 19661215 - PHILIPS PATENTVERWALTUNG
- V. K. VARADAN ET AL.: "Smart materials and Structures", vol. 8, April 1999, IOP PUBLISHING LTD., article "Design and Development of electronically tunable Microstrip Antennas", pages: 238 - 242

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