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EP 4246722 A4 20240529 (EN)

Application
EP 21902208 A 20211016

Priority
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Abstract (en)
[origin: EP4246722A1] Embodiments of this application provide an antenna, including a dielectric substrate, at least one first antenna element that is resonant at a first frequency, at least one second antenna element that is resonant at a second frequency, a first resonant circuit, and a second resonant circuit. The at least one first antenna element and the at least one second antenna element are arranged on the dielectric substrate. When there are at least two first antenna elements, and there are at least two second antenna elements, there is a spacing between each first antenna element, there is a spacing between each second antenna element, and there is a spacing between each first antenna element and each second antenna element. The first resonant circuit is located on a port of the first antenna element, and the second resonant circuit is located on a port of the second antenna element. The first resonant circuit is connected for the first frequency, and the first resonant circuit is disconnected for the second frequency. The second resonant circuit is connected for the second frequency, and the second resonant circuit is disconnected for the first frequency. This improves a communication rate.

IPC 8 full level
H01Q 1/52 (2006.01); **H01Q 1/38** (2006.01); **H01Q 5/321** (2015.01); **H01Q 5/328** (2015.01); **H01Q 5/335** (2015.01); **H01Q 21/28** (2006.01); **H01Q 5/48** (2015.01); **H01Q 9/28** (2006.01); **H01Q 21/30** (2006.01)

CPC (source: CN EP)
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Citation (search report)
• [X] CN 106549227 A 20170329 - UNIV NANJING SCIENCE & TECH
• [XI] US 2006012526 A1 20060119 - LIANG JIA-HAUR [TW], et al
• [X] CN 201174424 Y 20081231 - GUANGDONG TONGYU COMM EQUIPMEN [CN]
• [X] US 2013328742 A1 20131212 - HIROBE TAKANORI [JP], et al
• [X] ZHANG YAO ET AL: "Dual-band filtering antenna with controllable frequencies and bandwidths", 2016 IEEE 5TH ASIA-PACIFIC CONFERENCE ON ANTENNAS AND PROPAGATION (APCAP), IEEE, 26 July 2016 (2016-07-26), pages 185 - 186, XP033057857, DOI: 10.1109/APCAP.2016.7843160
• [X] ZHANG YAO ET AL: "Dual-Band Base Station Array Using Filtering Antenna Elements for Mutual Coupling Suppression", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, IEEE, USA, vol. 64, no. 8, 1 August 2016 (2016-08-01), pages 3423 - 3430, XP011618438, ISSN: 0018-926X, [retrieved on 20160802], DOI: 10.1109/TAP.2016.2574872
• [A] ZHANG XIU YIN ET AL: "Single/Dual Polarized Filtering Patch Antennas Without Using Extra Circuits", 2016 IEEE 5TH ASIA-PACIFIC CONFERENCE ON ANTENNAS AND PROPAGATION (APCAP), 26 July 2016 (2016-07-26), Kaohsiung, Taiwan, pages 311 - 312, XP093138898, Retrieved from the Internet <URL:https://ieeexplore.ieee.org/stampPDF/getPDF.jsp?tp=&arnumber=7843218&ref=aHR0cHM6Ly9pZWVleHBsb3JlLmllZWUub3JnL2F1dGhvcj8zNzI5MTk2OTAwMD9oaXN0b3J5PW5vJmhpZ2hsaWdodD10cnVl [retrieved on 20240307]
• See also references of WO 2022121501A1

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