

## Title (en)

Electrically tunable bandpass filters

## Title (de)

Elektrisch abstimmbare Bandpassfilter

## Title (fr)

Filtres passe-bande syntonisables par voie électronique

## Publication

**EP 2309586 A1 20110413 (EN)**

## Application

**EP 10185327 A 20020927**

## Priority

- EP 09177702 A 20020927
- EP 02778409 A 20020927
- US 32570101 P 20010927
- US 41300902 P 20020923

## Abstract (en)

There is described a tuneable bandpass filter with a passband. The filter comprises: at least one stripline resonator (600) having a reactance with a characteristic resonant frequency, the stripline resonator (600) comprises a central conductor (602), a dielectric substrate (606) and a pair of grounded outer conductors (604) formed on opposite sides of the dielectric substrate (606) and, wherein, the central conductor (602) is sandwiched between a pair of ferro-electric films (608) and each ferro-electric film (608) is mounted between the central conductor (602) and the dielectric substrate (606), each ferro-electric film (608) having a dielectric constant with a value that changes with an applied electric field so that the reactance of the resonator (600) and therefore the resonant frequency of the resonator (600) and the passband of the filter depend on the dielectric constant of the ferro-electric films (608).

## IPC 8 full level

**H01P 1/00** (2006.01); **H01P 1/203** (2006.01)

## CPC (source: EP KR)

**H01P 1/203** (2013.01 - EP KR); **H01P 1/20336** (2013.01 - EP)

## Citation (applicant)

- US 325701 P
- ELECTRICALLY TUNABLE BANDPASS FILTERS, 9270120

## Citation (search report)

- [X] US 3192397 A 19650629 - NETHERCOT JR ARTHUR H
- [I] WO 9428592 A1 19941208 - DU PONT [US]
- [I] EP 0843374 A2 19980520 - SHARP KK [JP]
- [A] US 5900390 A 19990504 - DAS SATYENDRANATH [US]
- [A] US 5935910 A 19990810 - DAS SATYENDRANATH [US]
- [A] FR 2714217 A1 19950623 - THOMSON CSF [FR]
- [A] US 5241291 A 19930831 - BLACKBURN DANE E [US]
- [A] EP 0590612 A1 19940406 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [A] US 5908811 A 19990601 - DAS SATYENDRANATH [US]
- [A] LIANG X-P ET AL: "HYBRID RESONATOR MICROSTRIP LINE ELECTRICALLY TUNABLE FILTER", 2001 IEEE MTT-S INTERNATIONAL MICROWAVE SYMPOSIUM DIGEST.(IMS 2001). PHOENIX, AZ, MAY 20 - 25, 2001, IEEE MTT-S INTERNATIONAL MICROWAVE SYMPOSIUM, NEW YORK, NY: IEEE, US, vol. 3 OF 3, 20 May 2001 (2001-05-20), pages 1457 - 1460, XP001067495, ISBN: 0-7803-6538-0

## Cited by

RU189237U1

## Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

## DOCDB simple family (publication)

**WO 03028146 A1 20030403**; AT E473528 T1 20100715; BR 0212843 A 20050628; CA 2461886 A1 20030403; CN 1592985 A 20050309; DE 60236947 D1 20100819; EP 1433219 A1 20040630; EP 1433219 B1 20100707; EP 2164129 A1 20100317; EP 2164129 B1 20130717; EP 2309586 A1 20110413; EP 2309586 B1 20140101; IL 161064 A0 20040831; JP 2006503445 A 20060126; JP 4071712 B2 20080402; KR 101036117 B1 20110523; KR 101250060 B1 20130403; KR 20040037175 A 20040504; KR 20090074274 A 20090706; MX PA04002907 A 20040705; NO 20041903 L 20040615; RU 2004112757 A 20050327

## DOCDB simple family (application)

**US 0231118 W 20020927**; AT 02778409 T 20020927; BR 0212843 A 20020927; CA 2461886 A 20020927; CN 02823334 A 20020927; DE 60236947 T 20020927; EP 02778409 A 20020927; EP 09177702 A 20020927; EP 10185327 A 20020927; IL 16106402 A 20020927; JP 2003531553 A 20020927; KR 20047004545 A 20020927; KR 20097011258 A 20020927; MX PA04002907 A 20020927; NO 20041903 A 20040426; RU 2004112757 A 20020927