

Title (en)  
Band-pass speedy tunable filter of the combline-type.

Title (de)  
Schnell abstimbarer Bandpassfilter in Kammleitungsform.

Title (fr)  
Filtre passe-bande raccordable à grande vitesse, en forme de peigne.

Publication  
**EP 0431234 A1 19910612 (EN)**

Application  
**EP 89830542 A 19891207**

Priority  
EP 89830542 A 19891207

Abstract (en)  
Band-pass speedy tunable filter (20) of the combline type, the electrical circuit of which is provided with semiconductor devices (D1,D2,D3) so connected that: the junction capacity of each one is liable to controllable variation depending on the controlled variation of the applied reverse tension (Vc) of polarization; a corresponding variableness of the center frequency of the passing band is thereby possible; the speedy tuning of such a filter (20) depends on the very short delay (in the range of nanoseconds) of the occurred variation of the junction capacity in respect to the moment that the reverse tension (Vc) was applied. The improvement due to the insertion of suitable semiconductor devices (D1,D2,D3) - either of the MESFET-, or HEMT-, or VARACTOR-type - in the equivalent circuit of this band-pass filter (20), as well as the improvement relating to the use of a control rheophore (25) acting on the by-pass inductances (LB1, LB2, LB3) of the circuit make as desired said junction capacity dependent on the applied reverse tension (Vc); and the center frequency is thereby liable to controllable variation whose values increase with that applied reverse tension (Vc).

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**H01P 1/205**

IPC 8 full level  
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CPC (source: EP)  
**H01P 1/205** (2013.01)

Citation (search report)

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- [A] US 3327255 A 19670620 - HARRIETTE BOLLJAHN, et al
- [Y] MICROWAVE JOURNAL. vol. 22, no. 12, December 1979, DEDHAM US pages 60 - 61; J.A.G.MALHERBE: "An etched digital elliptic filter"
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- [A] 15th EUROPEAN MICROWAVE CONFERENCE-PROCEEDINGS 12-15 september 1988, Stockholm, SE; Microwave Exhibitions and Publishers Ltd, Kent, GB, 1988; J.-L.CAZAUX et al.: "The use of double heterojunction diodes in monolithic phase shifters" pages 1005-1010
- [A] 1987 IEEE MTT-S INTERNATIONAL MICROWAVE SYMPOSIUM DIGEST, Vol.2, June 9-11, 1987, Las Vegas, US; IEEE, New York, US, 1987 K.CHANG et al.: "Varactor-tuned microstrip ring resonators" pages 867-870

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