

Title (en)

Band-pass filter with dielectric resonators presenting negative coupling between resonators.

Title (de)

Banddurchlassfilter mit dielektrischen Resonatoren, mit negativer Kupplung zwischen Resonatoren.

Title (fr)

Filtre passe-bande à résonateurs diélectriques, présentant un couplage négatif entre résonateurs.

Publication

**EP 0101369 A1 19840222 (FR)**

Application

**EP 83401602 A 19830802**

Priority

FR 8213927 A 19820810

Abstract (en)

1. A resonator filter comprising a rectangular waveguide (1-3) and n dielectric resonators (R1-R6) disposed inside the waveguide (with n being not less than 4), in which negative coupling is provided between two of the n resonators (R2, R5), the waveguide operating below its cutoff frequency, the filter being characterized in that the waveguide is folded back on itself with a wall (2) that is common between its two folded portions, the two negatively coupled resonators being situated on either side of the common wall, the dimensions of the cross-section of the waveguide being about 2 to 2.5 times the transverse dimensions of the resonators, and in that the filter includes a coupling rod (20) for providing the negative coupling, said rod passing through the common wall via a hole and being electrically separate from the common wall, at least apart from its ends.

Abstract (fr)

Filtre passe-bande à résonateurs diélectriques dans lequel un couplage négatif est effectué entre résonateurs non-adjacents. Le filtre est réalisé au moyen de résonateurs diélectriques montés en série dans un guide d'ondes rectangulaire replié en U. Un couplage négatif par tige (20) est réalisé entre deux résonateurs non-adjacents séparés par la paroi commune (2) du guide en U. Application à l'obtention de filtres passe-bande présentant une courbe de réponse amplitude-fréquence à flancs raides autour de la bande passante.

IPC 1-7

**H01P 1/219**

IPC 8 full level

**H01P 1/219** (2006.01)

CPC (source: EP)

**H01P 1/219** (2013.01)

Citation (search report)

- [Y] EP 0060174 A1 19820915 - THOMSON CSF [FR]
- [Y] US 2749523 A 19560605 - MILTON DISHAL
- [A] FR 2355403 A1 19780113 - MURATA MANUFACTURING CO [JP]
- [A] FR 951366 A 19491024 - HAZELTINE CORP

Cited by

DE3530676A1; US5781085A; DE19916605C1; EP1045470A3; US5841330A; US6094113A; US5777534A; US5739733A; US5410284A; US5153541A; GB2257308A; GB2257308B; EP1321997A3; GB2555407A; CN111370818A; GB2555407B; US6836198B2; US6239673B1

Designated contracting state (EPC)

AT BE CH DE GB IT LI LU NL SE

DOCDB simple family (publication)

**EP 0101369 A1 19840222; EP 0101369 B1 19880518**; AT E34488 T1 19880615; DE 3376717 D1 19880623; FR 2531815 A1 19840217; FR 2531815 B1 19850802

DOCDB simple family (application)

**EP 83401602 A 19830802**; AT 83401602 T 19830802; DE 3376717 T 19830802; FR 8213927 A 19820810