

Title (en)
Superconducting strip filter

Title (de)
Supraleiterbandfilter

Title (fr)
Filtre supraconducteur en technique de ligne à bande

Publication
EP 0714150 A1 19960529 (DE)

Application
EP 95113967 A 19950906

Priority
DE 4441488 A 19941122

Abstract (en)
A superconducting band pass filter (3) has strip conductors (1) formed on the surface of a substrate (5) and contacts are provided to two of the edges (9). The substrate is retained in holders (10) under an applied load. The superconducting device acts as a filter for high frequency signals applied to the contacts. Adjustment of the filter is effected by a pair of mechanical units (16,17) that have pressure elements with contact pads (7,18) that press against the surfaces of the substrate. The displacement applied by the adjusters varies the curvature and the overall length of the filter changes to tune the device. An alternative version uses a magnetic field adjustment effect.

Abstract (de)
Es wird ein Supraleiterbandfilter vorgeschlagen, das auf einem Substrat aufgebrachte Streifenleiter aus einem supraleitfähigen Material aufweist. Es ist eine Abstimmvorrichtung vorgesehen, mittels der die magnetische Eindringtiefe und/oder die effektiven Abmessungen der Streifenleiter und dadurch die Mittenfrequenz und/oder die Bandbreite des Supraleiterbandfilters variierbar ist. <IMAGE>

IPC 1-7
H01P 1/203

IPC 8 full level
H01P 1/203 (2006.01); **H01P 1/205** (2006.01)

CPC (source: EP US)
H01P 1/20363 (2013.01 - EP US); **Y10S 505/701** (2013.01 - EP); **Y10S 505/866** (2013.01 - EP)

Citation (search report)

- [X] US 3663902 A 19720516 - DEUTSCHER GUY, et al
- [X] M.R. MINET ET AL.: "Filtres hyperfréquences intégrés a surtension élevée utilisant des supraconducteurs", COLLOQUE INTERNATIONAL SUR LA MICROELECTRONIQUE AVANCEE, 6 April 1970 (1970-04-06) - 10 April 1970 (1970-04-10), PARIS, pages 271 - 281, XP001401535
- [A] PATENT ABSTRACTS OF JAPAN vol. 14, no. 312 (E - 0948) 5 July 1990 (1990-07-05)
- [A] J.H. TAKEMOTO-KOBAYASHI ET AL.: "Monolithic high-Tc superconducting phase shifter at 10 GHz", IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 40, no. 12, NEW YORK US, pages 2339 - 2344, XP000335894
- [A] PATENT ABSTRACTS OF JAPAN vol. 8, no. 285 (E - 287)<1722> 26 December 1984 (1984-12-26)

Cited by
CN110832962A

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
DE 4441488 A1 19960523; EP 0714150 A1 19960529; JP H08222908 A 19960830; US 5770546 A 19980623

DOCDB simple family (application)
DE 4441488 A 19941122; EP 95113967 A 19950906; JP 30267295 A 19951121; US 55165495 A 19951101