

Title (en)

WAVEGUIDE QUADRUPLER MODE MICROWAVE FILTER HAVING ZERO TRANSMISSION

Title (de)

WELLENLEITER-QUADRUPELMODEN-MIKROWELLENFILTER MIT NULLÜBERTRAGUNG

Title (fr)

FILTRE HYPERFREQUENCE QUADRI-MODES EN GUIDE D'ONDES ET POSSEDANT DES ZEROS DE TRANSMISSION

Publication

**EP 1451891 A1 20040901 (FR)**

Application

**EP 02803825 A 20021121**

Priority

- FR 0203988 W 20021121
- FR 0115252 A 20011126

Abstract (en)

[origin: FR2832860A1] The invention concerns a quadruple mode microwave filter with cavities coupled with a plurality transmission zeros, comprising at least a quadruple mode rectangular parallelepiped cavity, at least two rectangular irises, and two input-output access guides. The tuning and the coupling of the filter are obtained solely by the dimensions of the at least one resonant cavity and of the irises, as well as their mutual arrangement, without any tuning screw or other tuning mechanism. All the surfaces of the cavities and of the irises are either mutually parallel or mutually perpendicular. In a preferred embodiment, the irises are eccentric along two transverse axes. In accordance with an advantageous characteristic, the input mode is the same as the output mode, preferably basic T10 mode.

[origin: FR2832860A1] The quadrimode hyperfrequency filter has a quadrimode resonant cavity of rectangular shape (16) with an input waveguide (10) and an output guide (12). Coupling to the resonant cavity is via two irises (15,17). The cavity faces and the irises are parallel to each other.

IPC 1-7

**H01P 1/208**

IPC 8 full level

**H01P 1/208** (2006.01)

CPC (source: EP US)

**H01P 1/2082** (2013.01 - EP US)

Citation (search report)

See references of WO 03047022A1

Citation (examination)

- GUGLIELMI M. ET AL: "A new family of all-inductive dual-mode filters", IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 49, no. 10, 1 October 2001 (2001-10-01), pages 1764 - 1768, XP001108272, DOI: doi:10.1109/22.954782
- GUGLIELMI M. ET AL: "Implementing transmission zeros in inductive-window bandpass filters", IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 43, no. 8, 1 August 1995 (1995-08-01), NEW YORK, US, pages 1911 - 1915

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