

Title (en)
WAVEGUIDE FILTER

Title (de)
HOHLLEITERFILTER

Title (fr)
FILTRE DE GUIDES D'ONDES

Publication
EP 3379642 A1 20180926 (EN)

Application
EP 17161989 A 20170321

Priority
EP 17161989 A 20170321

Abstract (en)
Problem In prior-art high-frequency filters, to compensate for manufacturing tolerance, it is common practice to tune the filter using tuning elements such as threaded screws made of metal or various combinations of metal and plastics. Resonator casings made of aluminum require interference threads for receiving the corresponding tuning elements since aluminum is too soft for fine threads. Further, contamination of the aluminum used as raw material - such as by ferrite, nickel, steel or other ferromagnetic material - causes the casing to exhibit hysteresis when exposed to reversing magnetic fields, thus resulting in undesired passive intermodulation. Avoiding this intermodulation imposes a high degree of purity on the raw material employed, which in turn increases the unit cost of a filter manufactured from such material. Solution The problem is solved by a waveguide filter having a casing of material transparent to light of a designated lasing wavelength, the casing bearing an electrically conductive internal plating such that the casing defines a radio-frequency cavity, and dielectric resonators protruding into the cavity, the resonators being dimensioned such as to exhibit a given resonant frequency.

IPC 8 full level
H01P 1/208 (2006.01); **H01P 11/00** (2006.01)

CPC (source: EP)
H01P 1/2084 (2013.01); **H01P 11/007** (2013.01)

Citation (applicant)
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Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
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