

Title (en)  
Dielectric multimode resonator

Title (de)  
Dielektrischer multimoder Resonator

Title (fr)  
Résonateur multimodal diélectrique

Publication  
**EP 1962371 A1 20080827 (EN)**

Application  
**EP 07003579 A 20070221**

Priority  
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Abstract (en)  
The present invention relates to a dielectric multimode resonator that comprises walls (2a, 2b, 2c) enclosing a resonator cavity (3), and a resonator element (4) made of dielectric material and disposed in the resonator cavity (3). The resonator element (4) comprises a plurality of interconnected elongate portions (5), each extending longitudinally from a connection to a wall (2a, 2b, 2c) to an adjacent branching region (6) from which the elongate portion (5) and at least two further of the elongate portions (5) extend longitudinally in different directions or between two adjacent such branching regions (6). At least a section of each elongate portion (5) between its two longitudinal ends (5a, 5b) is spaced from the walls (2a, 2b, 2c) and from connections to the walls (2a, 2b, 2c). The elongate portions (5) are only joined at longitudinal ends (5b) thereof at the branching regions (6). Each two adjacent branching regions (6) are separated by an elongate portion (5) extending longitudinally between them. The plurality of elongate portions (5) includes a group of at least three interconnected elongate portions (5), wherein each of the two longitudinal ends (5a, 5b) of each elongate portion (5) included in this group is either connected to a wall (2a, 2b, 2c) or is directly joined to exactly one of the two longitudinal ends (5b) of each of exactly two of the other elongate portions (5) included in this group, so that there is at least one branching region (6) from which exactly three elongate portions (5) extend in three different directions.

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Citation (search report)

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