

## Title (en)

Whispering-gallery mode microwave resonator.

## Title (de)

In Flüstergalerie-Modi angeregter Mikrowellenresonator.

## Title (fr)

Résonateur hyperfréquence en mode de chuchotement en galerie.

## Publication

**EP 0296007 A1 19881221 (FR)**

## Application

**EP 88401343 A 19880603**

## Priority

FR 8707940 A 19870605

## Abstract (en)

The resonator consists of a resonating element contained in a flat disc (7), of diameter (2a) much greater than its thickness (2d). An electromagnetic wave propagates therein, confined between the perimeter of the disc (7) and a so-called caustic surface (3) of lesser radius (ac). The wave does not radiate outside, and the resonator can be placed on a dielectric (6) or metal (26) substrate. The disc can be hollowed out inside (22) the caustic (3). A resonator can be simulated, through the thickness of a dielectric substrate (6), by at least one metal ring (13) which forms, with the earth plane (10), a magnetic short-circuit (14). Excitation by microstrips (9) or by dielectric image guides (11). <??>Application to the frequency-stabilising of microwave oscillators, and to the combining of power with passive or active microwave filtering. <IMAGE>

## IPC 1-7

**H01P 7/10**

## IPC 8 full level

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## CPC (source: EP US)

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## Citation (search report)

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- [XP] 1987 IEEE MTT-S INTERNATIONAL MICROWAVE SYMPOSIUM DIGEST, vol. 1, Las Vegas, Nevada, 9-11 juin 1987, pages 367-370, IEEE, New York, US; X.H. JIAO et al.: "Whispering-gallery modes of dielectric structures applications to milimeter wave bandstop filter"
- [XP] IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. MTT-35, no. 12, décembre 1987, pages 1169-1175, IEEE, New York, US; X.H. JIAO et al.: "Whispering-gallery modes of dielectric structures: applications to milimeter-wave bandstop filters"

## Cited by

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