

Title (en)
WHISPERING-GALLERY MODE MICROWAVE RESONATOR

Publication
EP 0296007 B1 19920520 (FR)

Application
EP 88401343 A 19880603

Priority
FR 8707940 A 19870605

Abstract (en)
[origin: EP0296007A1] 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
H01P 7/08 (2006.01); **H01P 7/10** (2006.01)

CPC (source: EP US)
H01P 7/10 (2013.01 - EP US)

Cited by
CN107037660A

Designated contracting state (EPC)
DE ES GB IT NL SE

DOCDB simple family (publication)
EP 0296007 A1 19881221; EP 0296007 B1 19920520; DE 3871245 D1 19920625; ES 2031612 T3 19921216; FR 2616273 A1 19881209; FR 2616273 B1 19891020; JP S647801 A 19890111; US 4992763 A 19910212

DOCDB simple family (application)
EP 88401343 A 19880603; DE 3871245 T 19880603; ES 88401343 T 19880603; FR 8707940 A 19870605; JP 13921688 A 19880606; US 20085388 A 19880601