

Title (en)
MICROWAVE ON-CHIP RESONATOR AND ANTENNA STRUCTURE

Title (de)
MIKROWELLEN-ON-CHIP-RESONATOR UND ANTENNENSTRUKTUR

Title (fr)
RÉSONATEUR SUR PUCE À HYPERFRÉQUENCE ET STRUCTURE D'ANTENNE

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Abstract (en)
The invention provides a microwave on-chip resonator comprising at least one spherical dielectric resonator, an integrated circuit forming a chip, a surface layer forming a surface of the chip, the surface layer having at least one shallow indentation for placing one spherical dielectric resonator each, thereby holding the spherical dielectric resonator at a lower section thereof, a planar transmission line structure on the surface layer being adapted for coupling electromagnetic energy between the planar transmission line structure and the spherical dielectric resonator, a holding structure for holding the at least one spherical dielectric resonator in the shallow indentation of the surface layer, wherein the spherical dielectric resonator is engaged at its upper section opposite the lower section by the holding structure, the holding structure being at least partly made of metal or comprising metallized sections for influencing an electromagnetic field of the spherical dielectric resonator.

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Citation (search report)

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