Abstracts

Dual-mode filters for cellular base stations using metallized dielectric resonators

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A novel configuration for dual-mode filters employing dielectric ring resonators is presented. The coupling between two orthogonal polarized modes (HEM/sub 11/) within each dielectric ring is realized through a rectangular metallic strip deposited on the boundary of the ring (inner or outer). The coupling coefficient so obtained is large enough to allow the realization of high selectivity filters for cellular radio base stations. A 4 resonators test filter has been designed and realized using the novel resonators: the performances obtained are reported in the paper.

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