Abstracts

Dual-mode filters with grooved dielectric resonators for cellular-radio base stations

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Dual-mode filters for cellular-radio base-stations require resonators with high unloaded Q-factor, wide spurious-free operating window and possibility of high coupling values either to input or between resonators. These features are obtained by employing a new cavity resonator loaded by a grooved ceramic disk. The groove, which may increase up to a full air gap, allows the insertion of probes and tuning/coupling screws where the field is stronger. Experimental results of an eight-pole transmit filter show the suitability of the proposed resonator for realizing cellular-radio base stations filters.

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