Abstracts

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

L. Accatino, G. Bertin, M. Mongiardo and G. Resnati. "Dual-mode filters with grooved/splitted dielectric resonators for cellular-radio base stations." 2002 Transactions on Microwave Theory and Techniques 50.12 (Dec. 2002 [T-MTT] (Special Issue on 2002 International Microwave Symposium)): 2882-2889.

Dual-mode filters for cellular-radio base stations require resonators with a high unloaded Q-factor, a wide spurious-free operating window and the possibility of high coupling values either to input or between resonators. These features are obtained by employing a cavity resonator loaded by grooved/split ceramic disks, which allows insertion of probes and/or tuning/coupling screws where the field is highly concentrated. In this paper, cavity resonator behavior, intercavity couplings, and filter computer-aided tuning are discussed in detail. Experimental results of an eight-pole transmit filter confirm the suitability of the proposed resonator for realizing cellular-radio base stations filters for UNITS and IMT-2000 applications.

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