

Abstracts

Simplified Analysis of Inhomogeneous Dielectric Block Comline Filters

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Dielectric block comline filters constructed of low-loss temperature stable high dielectric constant ceramic materials are used in very large quantities for mobile communications. An inhomogeneous version having significant advantages in terms of achievable Q factor and symmetry of response characteristics was introduced by Fukasawa. A new analysis of this structure which clearly depicts its novel aspects by giving a physically significant equivalent circuit is presented. In addition to improved understanding, the simplification could lead to wider utilization of such inhomogeneous structures and stimulate advances in the technology.

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