

Title (en)

DIELECTRIC RESONATOR CONFIGURATION FOR MICROWAVE-MULTIPOLE BANDPASS FILTERS

Title (de)

DIELEKTRISCHE RESONATORKONFIGURATION FÜR MIKROWELLEN-MEHRPOLBANDPASSFILTER

Title (fr)

CONFIGURATION DE RESONATEUR DIELECTRIQUE POUR FILTRE PASSE-BANDE MULTIPOLAIRE A MICRO-ONDES

Publication

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Application

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Abstract (en)

[origin: DE19927798A1] The invention relates to a dielectric resonator configuration which uses two dielectric spacers in order to separate the dielectric resonator from two end plates. The resonator configuration provides a very high unloaded Q-factor for a mixed electromagnetic double wave (HEM₁₁ delta wave) and a strong modulation and coupling of the (HEM₁₁ delta wave). A negative and a positive cross coupling between non-adjacent waves can thus be attained, and N = 2k (k = 2, 3, 4)-pole bandpass filters having quasi elliptical properties can be realized. This resonator configuration also makes it possible to prevent a self-maintaining discharge for filters which operate with high capacity and low-pressure gas and to attain an improved wave separation for multichannel filters.

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