Abstracts

A Frequency-Stabilized Microwave Band-Rejection Filter Using High Dielectric Constant Resonators

M.A. Gerdine. "A Frequency-Stabilized Microwave Band-Rejection Filter Using High Dielectric Constant Resonators." 1969 Transactions on Microwave Theory and Techniques 17.7 (Jul. 1969 [T-MTT]): 354-359.

The high permittivity dielectric resonator is a low loss microwave filter element whose size is substantiality less than metal waveguide cavities. Temperature stabilizing their resonant frequency increases the applicability of such elements. A temperature compensated 3-section band-rejection filter using dielectric resonators has been fabricated and tested. The measured electrical performance was comparable to metal waveguide filters and the frequency stability for temperature variations was comparable to brass waveguide cavity filters which are not temperature compensated.

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