Abstracts

Preliminary Design Steps for Thin-Film Superconducting Filters

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Techniques which aid in the design and development of microstrip filters on high-dielectric-constant substrates are presented. While the procedures are valid for most types of coupled-line filter structures, they are particularly useful as the initial steps in designing superconducting MIC filters. Numerical examples are given for both Chebychev and elliptical designs, and experimental results are provided for a 4-pole, modified hairpin microstnp filter built on a lanthanum galate substrate. Experimental measurements at liquid nitrogen temperatures show excellent agreement with the predicted performance.

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