Abstracts

An HTS narrow bandwidth coplanar shunt inductively coupled microwave bandpass filter on LaAlO/sub 3/

A. Vogt and W. Jutzi. "An HTS narrow bandwidth coplanar shunt inductively coupled microwave bandpass filter on LaAlO/sub 3/." 1997 Transactions on Microwave Theory and Techniques 45.4 (Apr. 1997 [T-MTT]): 492-497.

Coplanar waveguide bandpass filters with shunt inductively coupled resonators using high-temperature superconductors (HTS's) on LaAlO/sub 3/ substrates were developed for high packing density, narrow bandwidth, and low power applications. The computer-aided design and measurements on resonators to test weak end-coupling are described in this paper. A coplanar three-pole Chebychev bandpass filter with 1.8% 3-dB bandwidth at 10 GHz and 1.3-dB insertion loss at 77 K was fabricated and measured. The maximum superconducting current density of the filter is evaluated.

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