Abstracts

High-temperature superconducting bandpass spiral filter

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We report a new type of microstrip bandpass spiral filter structure, which exhibits much smaller size than other existing miniaturized bandpass filter structures, and is particularly useful in developing high-temperature superconducting (HTS) compact filters for cellular communication systems. A prototype three-stage HTS bandpass spiral filter with center frequency of 633 MHz was designed and fabricated on a 20 mm/spl times/8 mm/spl times/0.5 mm LaAlO/sub 3/ substrate. The measurement results of the spiral filter have good agreements with its electromagnetic full-wave simulation results.

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