Abstracts

Microstrip triangular patch resonator filters

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In this paper we present some results of a primary development of microstrip bandpass filters comprised of triangular patch resonators for high temperature superconducting (HTS), micromachined circuits and other applications. Advantages of a triangular patch resonator filter are not only its higher capability of power handling, but also its natural circuit topology that can inherently implement finite-frequency transmission zeros in a simple cascading structure. In order to have the transmission zeros on the either side of the passband, two different resonant modes of triangular patch resonators are employed. Two three-pole filters of this type, which may form the basic units for higher order filters, are for the first time demonstrated both theoretically and experimentally.

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