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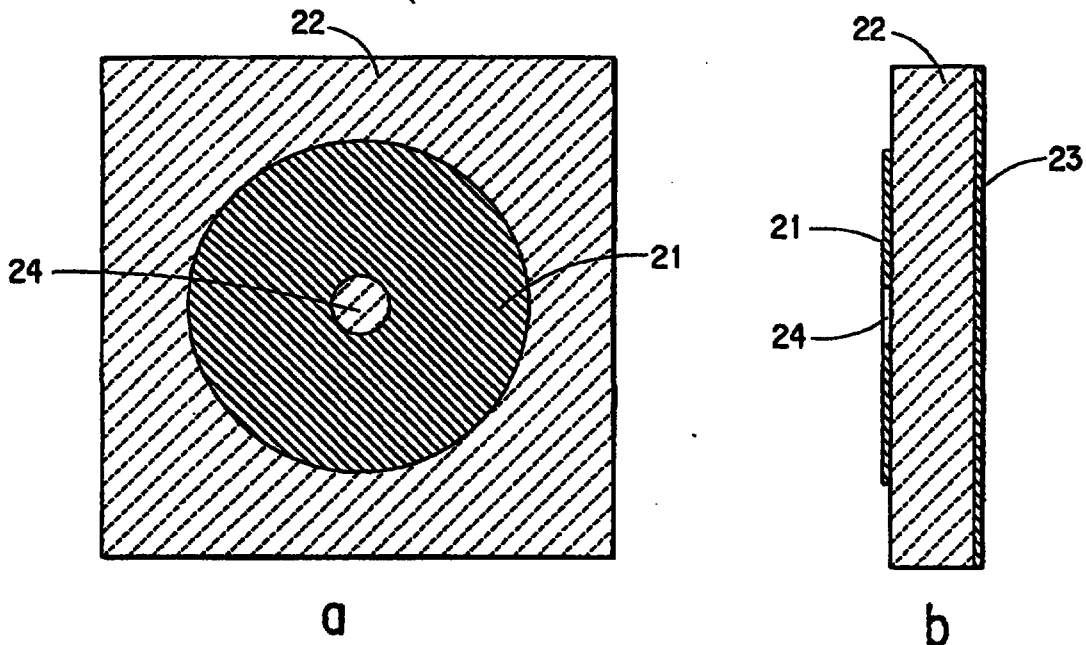
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(54) Title: RESONATORS FOR HIGH POWER HIGH TEMPERATURE SUPERCONDUCTING DEVICES



(57) Abstract

TM₀₁₀ mode (i = 1, 2, 3 ...) planar high temperature superconductor resonators useful in high temperature superconducting filters, filter banks and multiplexers comprise a shaped high temperature superconductor film and a high temperature superconductor ground plate deposited on opposite sides of a dielectric substrate, wherein the shaped high temperature superconductor film has an aperture in the center thereof and has a shape selected from the group consisting of circles and polygons.