Abstracts

Lower Order Modes of YBCO/STO/YBCO Circular Disk Resonators (Short Papers)

S. Gevorgian, E. Carlsson, P. Linner, E. Kollberg, O. Vendik and E. Wikborg. "Lower Order Modes of YBCO/STO/YBCO Circular Disk Resonators (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.10 (Oct. 1996, Part I [T-MTT]): 1738-1741.

Lower order modes in a single crystal strontium titanate (STO) circular disk resonator are studied experimentally. Superconducting epitaxial YBCO films form the parallel-plates of the resonator. Due to the extremely high dielectric constant of STO, the electric fields are concentrated between the plates, while there is a substantial magnetic fringing field which affects both the resonant frequencies, Q-factors, and tunability of all modes, especially the TM/sub 110/ and TM/sub 210/.

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