Abstracts

Design of narrow-band tunable band-pass filters based on dual mode SrTiO/sub 3/ disc resonators

A. Deleniv, A. Eriksson and S. Gevorgian. "Design of narrow-band tunable band-pass filters based on dual mode SrTiO/sub 3/ disc resonators." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 1197-1200 vol.2.

Design of four-pole band-pass tunable filters based on two dual mode STO disc resonators (0.5 mm thick, 7.0 mm in diameter) is reported. Chebishev filters without and with transmission zeroes are realized utilizing two degenerate TM/sub 110/ modes. Experimentally obtained Q-factor and resonant frequency of the disc resonators are used in filter simulations. The filters are designed for operation at 60 K with center frequency 0.5 GHz and bandwidth less than 2.0%. The tunability (fractional change in center frequency) of the filters is about 8%.

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