Abstracts

A K-band tunable microstrip bandpass filter using a thin-film conductor/ferroelectric/dielectric multilayer configuration

G. Subramanyam, F. Van Keuls and F.A. Miranda. "A K-band tunable microstrip bandpass filter using a thin-film conductor/ferroelectric/dielectric multilayer configuration." 1998 Microwave and Guided Wave Letters 8.2 (Feb. 1998 [MGWL]): 78-80.

We report on a gold/strontium titanate (Au-SrTiO/sub 3/) thin-film K-band tunable bandpass filter on a lanthanum aluminate substrate. The two-pole filter has a center frequency of 19 GHz and a 4% bandwidth. Tunability is achieved through the nonlinear temperature dependence and the DC electric field dependence of the relative dielectric constant of SrTiO/sub 3/. A center frequency shift of 0.85 GHz was obtained at 400 V DC bias and 77 K without degrading the insertion loss of the filter.

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