Abstracts

Measured and Computed Performance of a Microstrip Filter Composed of Semi-Insulating GaAs on a Fused Quartz Substrate

P.H. Siegel, J.E. Oswald and R.J. Dengler. "Measured and Computed Performance of a Microstrip Filter Composed of Semi-Insulating GaAs on a Fused Quartz Substrate." 1991 Microwave and Guided Wave Letters 1.4 (Apr. 1991 [MGWL]): 78-80.

The performance of a microstrip hammerhead filter that has been fabricated on an electrically thin layer of semi-insulating GaAs backed by a fused quartz substrate is measured and computed. The filter is intended for applications involving ultra thin "lifted-off" or "etched-back" GaAs containing both active devices and passive microstrip circuitry backed by a much thicker mechanically rigid low-loss low-dielectric-constant substrate. The low pass characteristics of the hammerhead filter with the intermediate GaAs layer are compared with those of the same filter on quartz alone. Both the measured and computed data show a significant (= 10%) shift in the filter response curve when the thin GaAs layer is present.

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