



Behaviour of Thin Film TiO₂ Overlaid $\lambda/2$ Microstrip Rejection Filter Due to Ageing of the Overlay

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The long term behaviour of TiO₂ thin film overlaid $\lambda/2$ L-section rejection filter due to the ageing of the overlay is reported in this paper. The observations are over a period of upto 600 days with exposure to moisture in between. Due to overlay, existence of double resonance peaks and shifts in resonance due to the various ageing process is observed. The circuit after 600 days show a considerable shift in the resonance frequency to higher frequency side and increase in Q. The long term ageing aspects of the dielectric layers used for protection, passivation and improvement of circuit properties should be taken into consideration during design and fabrication.

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