



# **MULTILAYER INTERDIGITAL-HAIRPIN BANDPASS FILTER**

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## ABSTRACT

This paper presents multilayer interdigital-hairpin bandpass filter with six pole of resonator. The multilayer six pole interdigital-hairpin resonators centred at 2.58 GHz was designed using FR-4 substrate ( $\epsilon_r = 4.6$ ,  $\tan \delta = 0.025$ ). The return loss,  $S_{11}$  and insertion loss,  $S_{21}$  in the passband are 34.046 dB and 1.636 dB respectively. Six pole of resonator make the bandwidth wider where the fractional bandwidth obtained is 25.89%. The CST software was used to simulate and optimize the filter.

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