

Design a 5th order lowpass Chebyshev filter using microstrip structure. The filter will have the different specification of Cutoff frequency, Passband ripple, Input/output Characteristic.

Procedure:

- 1. Compute the normalise lowpass filter parameters**
- 2. Perform frequency & impedance scaling**
- 3. Convert scaled LC parameters to microstrip dimensions**
- 4. Draw out the layout of the microstrip filter**
- 5. Analysis the layout using network analysis, i.e. ABCD matrix & S-parameter**
- 6. Plot the insertion loss and return loss of the microstrip filter and compared it to the insertion loss and return loss of the circuit model**
- 7. Write a report and submit it to helpdesk**

Note: All the design and analysis work should be performed using Matlab.

