
   a. Use Excel, Matlab or Ansoft Designer SV or other software to plot
      i. the magnitude of $S_{11}$ and $S_{22}$ on one graph from 50 MHz to 5 GHz
      ii. the phase of $S_{11}$ and $S_{12}$ on a second graph over the same
          frequency range
      iii. repeat graphs above for $S_{12}$ and $S_{21}$.
   b. Is this filter linear phase or nearly so over its passband (approximately 0-625 MHz)?
   c. Evaluate equations 4.53a and 4.53b for this device at all frequencies given. Is the filter lossless or nearly so? Does the overall loss vary with frequency?
   d. What happens to the incident power outside the filter’s passband (i.e., is it absorbed or reflected)?