

Jack Mullen  
Jacob Hulvey  
Dawit Yerdea

## Chebyshev Filter Design

To get an idea of what order filter would meet the Chebyshev filter specifications, we used the doubly terminated bandpass filter design tool in ADS. This tool specified we needed a filter order of four to meet the design specifications. With this knowledge, we used the instructions from the filter slides and the textbook to first design a cheyshev filter to meets the desired specifications using lumped components. After determining that the lumped element model works correctly, we switched to create a Chebyshev filter utilizing ideal transmission lines and ideal open ended transmission line components. After determining the necessary components we