ECE 580

Homework 4

Due November 17, 2021

1. Find the zeros, poles and transfer function of a Butterworth filter with a passband limit 1 kHz, passband ripple < 0.5 dB, stopband limit 2 kHz and stopband loss > 20 dB. Plot the gain response.

2. Find the zeros, poles and transfer function of a Chebyshev filter with a passband limit 10 kHz, passband ripple = 0.5 dB, stopband limit 25 kHz and stopband loss > 50 dB. Plot the gain response.