

(c) Since $h_3[n] \xleftrightarrow{Z} H_3(z)$ is designed by frequency matching over the Nyquist bandwidth $H_3(e^{j\Omega}) = H_c(j\frac{\Omega}{T})$, the magnitude response $|H_3(e^{j\Omega})|$ is shown below. As in part (b), there is no aliasing. Since $|H_3(e^{j\Omega})|$ has no discontinuities, there is no Gibbs phenomenon.

