

$$H(j\omega) = \frac{200}{100 + j\omega} = \frac{200 \cdot (100 - j\omega)}{100^2 + \omega^2}$$

$$|H| = \frac{2 \sqrt{100^2 + \omega^2}}{100^2 + \omega^2}$$

$$\omega \rightarrow 0 \Rightarrow |H| \rightarrow 2$$

$$\Rightarrow 20 \log |H| \rightarrow 20 \log(2)$$

$$\omega \rightarrow \infty \Rightarrow |H| \rightarrow 0$$

$$\Rightarrow 20 \log |H| \rightarrow -\infty$$

$$\angle H = \arg\left(\frac{-\omega}{100}\right)$$

$$\omega \rightarrow 0 \Rightarrow \angle H \rightarrow 0$$

$$\omega \rightarrow \infty \Rightarrow \angle H \rightarrow -90$$

$$\omega = 100 \Rightarrow \angle H = \arg(-1) = -45$$

Bode

