

3.3

$Z_{AB} = R$ serie L serie C

$$\begin{aligned} Z_{AB} &= R + \frac{1}{jC\omega} + jL\omega \\ &= R + j \left(L\omega - \frac{1}{C\omega} \right) \\ &= R + j (200 - 100) \\ &= (100 + j100) \Omega \end{aligned}$$

$$\frac{1}{j} = \frac{j^2}{j^2} = -j$$

$$\hat{i} = \frac{e}{Z_{AB}} \qquad \hat{i} = I e^{j\varphi}$$

$$\begin{cases} I = \frac{|e|}{|Z_{AB}|} \\ \varphi_I = \varphi(e) - \varphi(Z_{AB}) \end{cases}$$