

$$\begin{aligned}
R1 &:= 57 & R2 &:= 14 & R3 &:= 48 & R4 &:= 0 & R5 &:= 65 & R6 &:= 0 & R7 &:= 0 & R8 &:= 0 \\
Xl1 &:= 0 & Xl2 &:= 0 & Xl3 &:= 0 & Xl4 &:= 31 & Xl5 &:= 0 & Xl6 &:= 29 & Xl7 &:= 28 & Xl8 &:= 36 \\
Xc1 &:= 83 & Xc2 &:= 0 & Xc3 &:= 23 & Xc4 &:= 0 & Xc5 &:= 0 & Xc6 &:= 91 & Xc7 &:= 0 & Xc8 &:= 19 \\
E6M &:= 67 & E6a &:= 214
\end{aligned}$$

$$Z1 := R1 + 1j \, (-Xc1) = 57 - 83j$$

$$Z2 := R2 = 14$$

$$Z34 := R3 + 1j \, (Xl4 - Xc3) = 48 + 8i$$

$$Z56 := R5 + 1j \, (Xl6 - Xc6) = 65 - 62i$$

$$Z7 := 1j \, (Xl7) = 28i$$

$$Z8 := 1j \, (Xl8 - Xc8) = 17i$$

$$E := E6M \cdot e^{1j \cdot E6a^\circ} = -55.546 - 37.466j$$

$$A := \begin{bmatrix} -1 & 0 & 0 & 1 & 0 & 1 \\ 1 & -1 & 0 & 0 & -1 & 0 \\ 0 & 1 & -1 & 0 & 0 & -1 \\ -Z1 & 0 & 0 & -Z56 & -Z7 & 0 \\ 0 & -Z2 & -Z34 & 0 & Z7 & 0 \\ Z1 & Z2 & 0 & 0 & 0 & Z8 \end{bmatrix}$$

$$B := \begin{bmatrix} 0 \\ 0 \\ 0 \\ -E \\ 0 \\ 0 \end{bmatrix} \quad B = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 55.546 + 37.466i \\ 0 \\ 0 \end{bmatrix}$$

$$I := A^{-1} \cdot B = \begin{bmatrix} 0.118 - 0.055i \\ 0.526 + 0.253i \\ -0.025 - 0.308i \\ -0.433 - 0.615i \\ -0.408 - 0.308i \\ 0.551 + 0.56i \end{bmatrix} \quad \begin{bmatrix} I1 \\ I2 \\ I34 \\ I56 \\ I7 \\ I8 \end{bmatrix} := I$$

$$I1 = 0.118 - 0.055i \quad I2 = 0.526 + 0.253i \quad I34 = -0.025 - 0.308i$$

$$I56 = -0.433 - 0.615i \quad I7 = -0.408 - 0.308i \quad I8 = 0.551 + 0.56i$$

$$Si := E \cdot \overline{I56} = 47.129 - 17.941i \quad Pi := \operatorname{Re}(Si) = 47.129 \quad Qi := \operatorname{Im}(Si) = -17.941$$