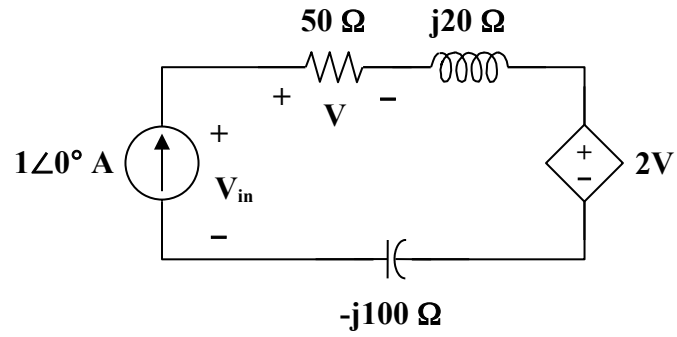


Chapter 9, Solution 62.

$$2 \text{ mH} \longrightarrow j\omega L = j(10 \times 10^3)(2 \times 10^{-3}) = j20$$

$$1 \text{ }\mu\text{F} \longrightarrow \frac{1}{j\omega C} = \frac{1}{j(10 \times 10^3)(1 \times 10^{-6})} = -j100$$



$$V = (1\angle 0^\circ)(50) = 50$$

$$V_{in} = (1\angle 0^\circ)(50 + j20 - j100) + (2)(50)$$

$$V_{in} = 50 - j80 + 100 = 150 - j80$$

$$Z_{in} = \frac{V_{in}}{1\angle 0^\circ} = 150 - j80 \text{ }\Omega$$