

Chapter 9, Solution 26.

$$j\omega \mathbf{I} + 2\mathbf{I} + \frac{\mathbf{I}}{j\omega} = 1\angle 0^\circ, \quad \omega = 2$$

$$\mathbf{I} \left(j2 + 2 + \frac{1}{j2} \right) = 1$$

$$\mathbf{I} = \frac{1}{2 + j1.5} = 0.4\angle -36.87^\circ$$

Therefore, $i(t) = \mathbf{0.4 \cos(2t - 36.87^\circ)}$