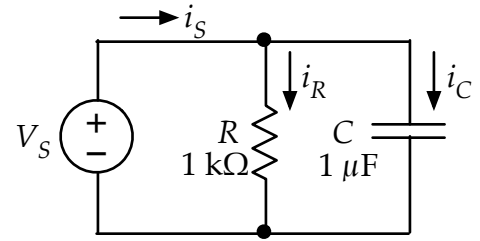


In the circuit shown at right, the voltage source is sinusoidal with

$$V_S(t) = V_m \cos(\omega t),$$

where  $V_m = 5 \text{ V}$  and  $\omega = 1000 \text{ rad/s}$ . Write the expression for the total current flowing through the source.

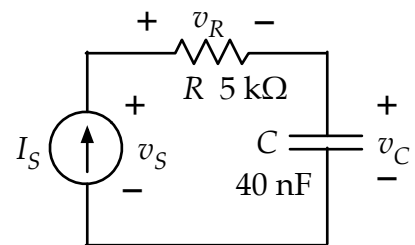


$i_S =$  \_\_\_\_\_

In the circuit shown at right, the current source is sinusoidal with

$$I_S(t) = I_m \sin(\omega t),$$

where  $I_m = 2 \text{ mA}$  and  $\omega = 5000 \text{ rad/s}$ . Write the expression for the total voltage across the source.



$v_S =$  \_\_\_\_\_