

ee101_rc1.sqproj

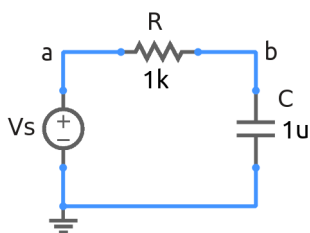


Figure 1: RC circuit driven by a voltage source.

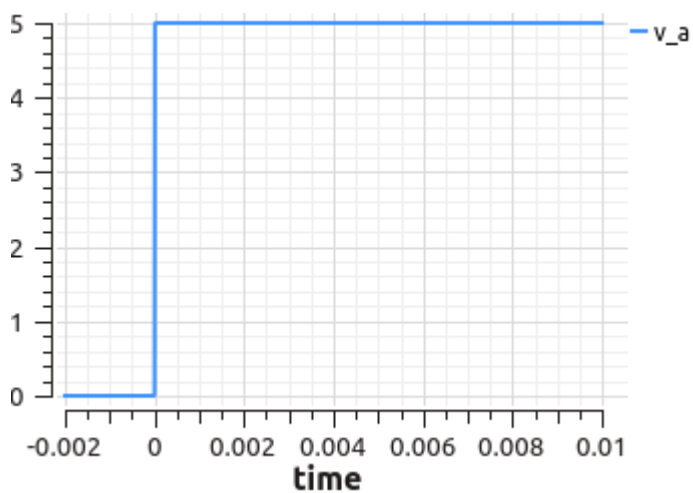


Figure 2: Step input voltage.

In the RC circuit shown in Fig. 1, the capacitor is initially uncharged. A step input as shown in Fig. 2 is applied.

Exercise Set

1. What is the circuit time constant?
2. Obtain expressions for the capacitor voltage and current for $t > 0$ sec.
3. Check your answers against simulation results.