

ee101_rc1a.sqproj

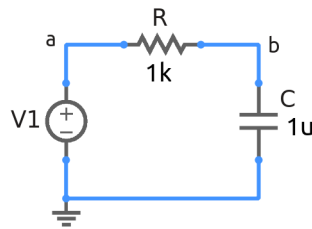


Figure 1: RC circuit driven by a voltage source.

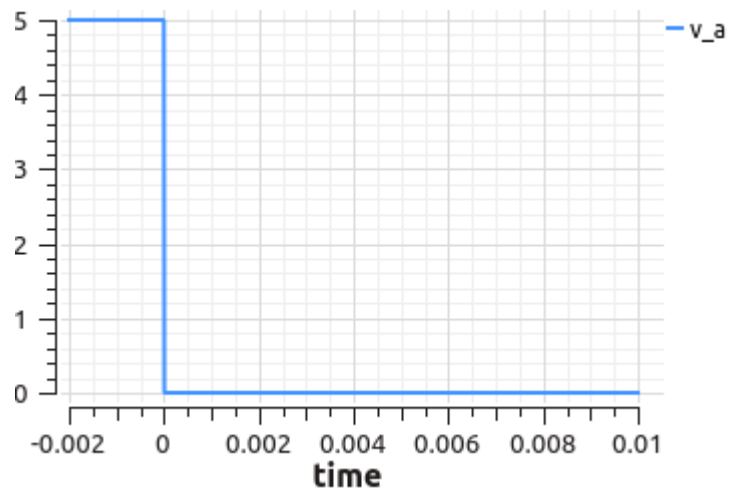


Figure 2: Step input voltage.

In the RC circuit shown in Fig. 1, the source voltage has been 5 V for a long time and changes to 0 V at $t = 0$ sec (see Fig. 2).

Exercise Set

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