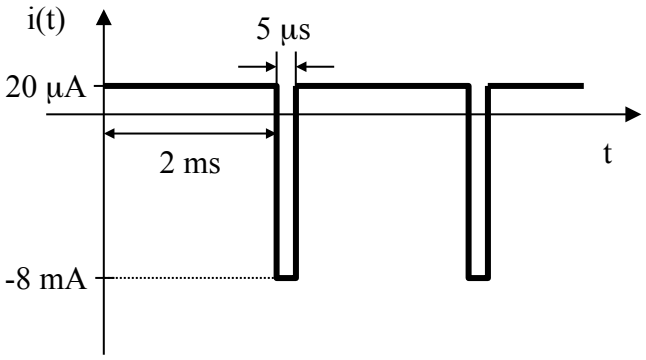
Chapter 7, Solution 92.

$$i = C\frac{dv}{dt} = 4\times10^{-9}\cdot\begin{cases}\dfrac{10}{2\times10^{-3}} & 0 < t < t_R\\[2ex] \dfrac{-10}{5\times10^{-6}} & t_R < t < t_D\end{cases}$$

$$i(t) = \begin{cases}20\ \mu A & 0 < t < 2\ ms\\ -8\ mA & 2\ ms < t < 2\ ms + 5\ \mu s\end{cases}$$

which is sketched below.



(not to scale)