A switching voltage source is connected directly across a 100-nF capacitor. The source voltage increases parabolically from 0 to 5V in 1-ms according to the relation, $V_S(t) = at^2$ where $a = 5\text{x}10^6$ V·s^{-2}, and then switches to decrease linearly back to 0 V in 5 ms. The cycle then repeats. (You might want to make a good sketch of the voltage waveform.)

Make a good *quantitive* sketch of the capacitor current as a function of time.