Simulazione gennaio 2016

Q 2

S=25·10^{-4} m^2 x=1·10^{-3}m t=0

$$v = \frac{dx}{dt} = \frac{1}{10}10^{-3} = 10^{-4} m/s$$

V=1·10^{3}V

$$i_s = \varepsilon_0 \frac{d\Phi(\vec{E})}{dt}$$

$$\Phi = E \cdot S = \frac{V}{x(t)} S \longrightarrow \frac{d\Phi(\vec{E})}{dt} = -SV\frac{1}{x^2}v$$

$$i_s = \varepsilon_0 \frac{S \cdot V}{x^2} v = 8{,}8 \cdot 10^{-12} \frac{25 \cdot 10^{-4} 10^3}{10^{-6}} 10^{-4} = 2{,}2\ 10^{-9}\ A$$